Aug 45 RAILROAD MAGAZINE

THOUSANDS NOW PLAY

who never thought they could!

Learned Quickly at Home

I didn't dream I could actually learn to play without a teacher. Now when I play for people they hardly believe that I learned to play so well in so short a time.
*H. C. S., Calif.

Plays at Dances

I have completed your course and your lessons have been most satisfactory. I can play all of the popular songs. I have also earned money playing at dances.
*E. N. J., New York.

Wouldn't Take $1000 for Course

The lessons are so simple that anyone can understand them. I have learned to play by note in a little more than a month. I wouldn't take a thousand dollars for my course. *S. E. A., Kansas City, Mo.

Finding New Joy

I am finding a new joy that I never experienced before, for I have always wanted to play, but had given up hope until I heard of your course.
*C. S., Lucien, Okla.

You Can't Beat It

I am glad to tell anyone about the U. S. School. It is just what they say it is and they will do what they say they will. If you want to learn music you can't beat it!
*W. E. D., N. Mex.

*Actual pupils names on request. Pictures by professional models.

You, too, can play any instrument By this EASY A-B-C Method

YOU think it's difficult to learn music? That's what thousands of others have thought! Just like you, they long to play some instrument—the piano, violin, guitar, saxophone or other favorites. But they denied themselves the pleasure—because they thought it took months and years of tedious study to learn.

Learn in Spare Time at Home

And then they made an amazing discovery! They learned about a wonderful way to learn music at home—without a private teacher—without tedious study—and in a surprisingly short time. They wrote to the U. S. School of Music for the facts about this remarkable short-cut method. And the facts opened their eyes! They were amazed to find how easy it was to learn.

The result? Over 750-000 men and women have studied music at home this simple, A-B-C way. Now, all over the world, enthusiastic music-lovers are enjoying the thrilling satisfaction of creating their own music. They have found the key to good time, popularity and profit.

Costs Less Than 7c a Day

And that's what you can do, right now. Get the proof that you, too, can learn to play your favorite instrument — quickly, easily, in spare time at home for less than seven cents a day. Never mind if you have no musical knowledge, training or talent. Just read the fascinating booklet and Print and Picture sample that fully explain all about the famous U. S. School method. If interested tear out the coupon now, before you turn the page. U. S. School of Music 3678 Brunswick Bldg. New York 10, N. Y. Largest school of its kind in the world. (47th year)

FREE!
Print and Picture Sample

NOTICE
Please don't confuse the U. S. School of Music method with any system of teaching music "by ear" or by trick charts. Our method teaches you to play by actual notes — not by any trick or number system.

U. S. SCHOOL OF MUSIC,
3678 Brunswick Bldg., New York 10, N.Y.

I am interested in music study, particularly in the instrument checked below. Please send me your free illustrated booklet "How to Learn Music at Home," and your free Print and Picture Sample.

Piano	Plain Accordion	Clarinet	Practical Finger Control
Guitar	Saxophone	Trombone	
Hawaiian Guitar	Trumpet, Cornet	Flute	Piccolo
Violin	Reed Organ	Modern Elementary Harmony	Mandolin
Piano Accordion	Tenor Banjo		
	Ukulele		

Have you ..... Instrument? .....

Name .....
(Please Print)

Address .....

City ..... State .....

Note: If you are under 16 years of age, parent must sign coupon.

SAVE 2c — STICK COUPON ON PENNY POSTCARD

RAILROAD MAGAZINE

Originally Railroad Man's Magazine, founded 1906

August, 1945 *Vol. 38, No. 3* *25 Cents*

Front Cover: "*In the Mohawk Valley,*" by Frederick Blakeslee

ILLUSTRATED FEATURES

Heart of the Locomotive ..... *Henry B. Comstock* 8
Build an N&W Streamlined 4-8-4 ..... *The Nut-Splitter* 42
The Would-Be Jesse James ..... *Raymond E. Maher* 54
Wanderlust *(Part 2)* ..... *Maxwell Swan* 116

TRUE TALES OF THE RAILS

Gold Trains ..... *John P. Connolly* 64
Wabash Washout ..... *"Silent Slim" Roach* 70
Bangor & Aroostook ..... *Raymond Higgins* 77

FICTION

Too Perfect ..... *William L. Rohde* 30
Varnish on the Signal ..... *John Paul Mills* 37

SHORT HAULS

Less than Carload Lots 6
Locomotive of the Month *(Virginian's "Allegheny")* 52
Back in the Days *(Twelve Noon)* ..... *Harry C. Temple* 63
Along the Iron Pike *(Odd Picture-Facts)* ..... *Joe Easley* 96
Wartime Fan Excursion *(Photos)* ..... *Gerald M. Best* 114

DEPARTMENTS

Light of the Lantern 45
Electric Lines *(Riding on the Running Board, John Miller)* ..... *S. D. Maguire* 86
On the Spot *(Railfaring Men Heard From)* 98
Railroad Camera Club *(Switch List)* 140
Model Trading Post 143

Henry B. Comstock, *Editor* **Freeman H. Hubbard, *Research Editor***

Published monthly by Popular Publications, Inc., 2256 Grove St., Chicago, 16. Editorial, advertising, subscription, and executive offices, 205 E. 42nd St., New York City, 17. Harry Steeger, President and Secretary, Harold S. Goldsmith, Vice President and Treasurer. Entered as second class matter January 6, 1943, at post office at Chicago, Ill., under Act of March 3, 1879. Copyright 1945, by Popular Publications, Inc. Printed in U. S. A. All rights reserved. Single copy 25c. By the year $2.50 in U. S. A., its dependencies, and Canada, Mexico and Cuba. Other countries, $3.50.

Manuscripts sent to this magazine should be accompanied by enough postage for their return if found unavailable. Publisher cannot accept responsibility for return of unsolicited material.

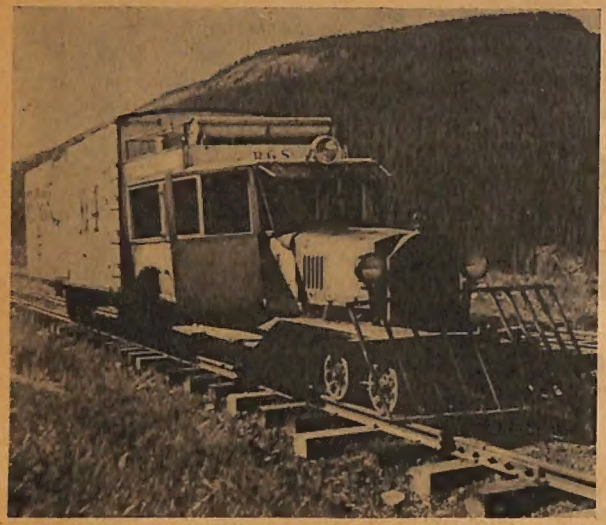
Why Uncle Sam is ahead more than

6 MILLION DOLLARS A DAY

BALANCE SHEET

In the other World War	In this World War
The railroads, in 1918, performed 405 billion ton-miles of freight service.	The railroads, in 1943, performed 727 billion ton-miles of freight service, 737 billion in 1944.
Railroads performed 42 billion miles of passenger service in 1918.	Railroads performed 87 billion miles of passenger service in 1943 and 95 billion in 1944.
Freight rates were raised about 25%.	Freight rates remain substantially the same as they were prior to the war.
The government took over the operation of the railroads.	The railroads have remained under their own management.
Deficits resulting from Federal operation cost the taxpayers 2 million dollars a day.	The railroads are paying Federal taxes at the rate of more than 4 million dollars a day — to say nothing of their state and local taxes.

ASSOCIATION OF
AMERICAN RAILROADS
ALL UNITED FOR VICTORY



Less Than Carload Lots

At least two other runaways of the *Goose* are reported by Lad G. Arend, car *Chama*, R.R. 2, Franklin, Ohio, who snapped the *Goose's* picture you see here.

"The RGS is in a bad way financially," he adds, "and will probably be abandoned when the war ends."

* * *

SIX SONS of Emil Schligman, C&NW baggageman at Mankato, Minn., are with our armed forces. They are Clarence, Glenn, Gerald, Leland, Everett, and Emmett. Each is at least six feet tall. Glenn and Leland are in the Army; the others are Navy men.

* * *

THE *GALLOPING GOOSE*, far-famed passenger unit of the Rio Grande Southern, consists of a sedan automobile body and motor mounted on a pint-sized boxcar on one rigid frame. One day last winter, reports the *Rio Grande Green Light*, she was wending her way from Dolores to Ridgway, Colo., on her daily passenger run. At Dallas Divide the "hogger" tested his brakes, knowing that the 11 miles to Ridgway was mostly 4 percent downgrade full of curves.

Brakes seemed to be okay, and down he started; but when the *Goose* picked up speed and he tried to apply the brakes, nothing happened. Everybody on board "joined the birds"—he himself, three passengers and a deadheading railman. All five landed unhurt in a snowbank. The *Goose* roared out of sight around a curve, apparently doomed to destruction.

The five pedestrians plodded wearily onward, looking into each ravine they passed for remains of the *Goose*. Arriving at Ridgway, they were amazed to find the runaway parked as neatly as you please in front of the depot. That's railroadin'.

POST-WAR COACH of Canadian National Railways will have all the main features advised in several recent surveys conducted by U.S. roads and car-builders. These include broad windows, bigger washrooms, better facilities for smokers, larger overhead racks, with the addition of smaller racks for such items as newspapers and magazines, and improved heating and air-conditioning systems. Among the passenger preferences now in use that will be continued are reclining seats, foot-rests, individual light for each double seat, pull-down window shades, and push-type door handles.

* * *

RADIO TRAIN ORDERS. For the first time on any railroad west of the Mississippi a moving train was in constant radio communication with headquarters, last April 17th, when a westbound freight carrying priority shipments received train orders by short-wave broadcast from the Rio Grande Bldg., Denver, Colo.

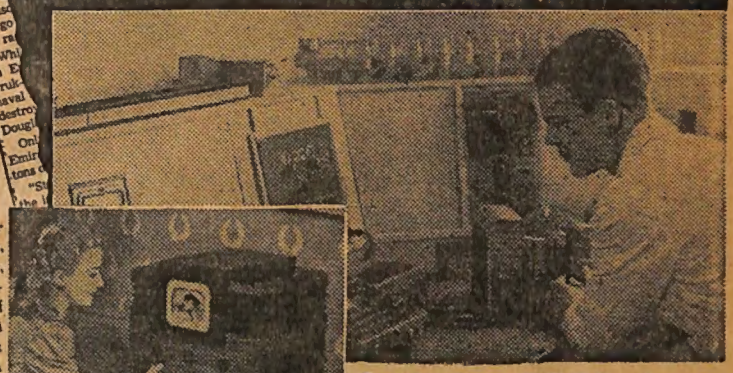
* * *

"THE SILK HAT" is the unofficial name of a certain New Haven freight train. More than 30 years ago an undertaking establishment, located near a station at which that train stopped, received a supply of new top hats for its employes. Not knowing what to do with the old ones, the undertaker gave one to each man in the train crew. For a month or so the trainmen actually wore the silk hats on duty.

GET INTO RADIO ELECTRONICS & TELEVISION NOW!

Hundreds of Industries Need Radio and Television Men Now and for Great Future Demands

The man trained in electronics is wanted not only in Radio and Television, but in Aviation, Transportation, Communications, . . . in the designing, engineering and operation of hundreds of industries today and for years to come. Learn how great the field is for YOU...How you may GET INTO BUSINESS FOR YOURSELF. Mail the coupon now.



Send for FREE Lesson and Prove to Yourself How Quick and Easy You Get Ahead in Radio by the NEW

SHOP METHOD HOME TRAINING

Learn by Doing!

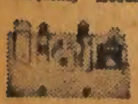
Use real Radio Equipment Furnished with your Course

Experience is the best teacher. You learn by experience with the exclusive National Shop-Method of Home Training—actually build many circuits and do experiments with the big kits of standard radio parts included in your training equipment at no extra cost to you.

Build a superheterodyne receiver. Make tests and conduct experiments that show you the why and how of electronics. Build an audio oscillator, signal generators and other instruments with the parts and supplies included in your course.

"F.M." Means Future Money

Frequency Modulation (F.M.) is here to stay. Thousands of F. M. licenses have been granted by the government F. C. C. all over the country. Learn what this means to you.



Get ready for TELEVISION. Get your share of the RADIO SERVICE Business. Here is a sensationally improved way for you to get the right training—a thoroughly proved system whereby you study in spare time—odd hours, even minutes—and have the advantage of actual shop experience behind you.

This exclusive shop method of home training comes to you right from one of the world's greatest vocational educational centers—the resident training shops and experimental laboratories of National Schools. It is the sound, practical training based on actual experience of qualified instructors and engineers who have prepared thousands of National graduates now employed in the radio industry.

It is up-to-date—matches the progress constantly being made in modern radio, television and electronics. It is time tested. National Schools has been training men for higher pay and greater opportunity for more than a third of a century. Fill out and mail the coupon below for details.

Shop Method Training Wins Good Jobs

"My latest offer was $5,800.00 as Radio Photo Engineer . . . but I'm doing well where I am now engaged. I am deeply indebted to National." —O. Joseph Grumich, Lake Hiawatha, New Jersey.

"Due to my training at National I was selected to instruct in the laboratory work of Navy and Marines."—R. R. Wright, Blackfoot, Idaho.

"I believe National offers the best course to be had. . . . Keep up the good work."—O. K. Ivey, Washington, D. C.

Read what hundreds of other enthusiastic students have written about National Training. Send in your coupon today.

Be Sure in Post-War

Now, right now, is the time to prepare for SUCCESS AND SECURITY in the great expansion after the war. The field is wide open. Trained men will get the preference in the broadcasting stations—in industry—will make quick progress with small capital in their own business. Soldiers, sailors and marines make use of your free time to get ready for the future. Study while still in uniform. Thousands of men in the armed forces have trained at National Schools under U. S. Government sponsorship.

See for Yourself

Now, right now, is the time to grasp the great opportunity of today—a successful career for tomorrow. Get into the big money, rapid advancement, a position of importance. A BUSINESS OF YOUR OWN. The industry is crying for trained men everywhere. A rapidly expanding business—probably the greatest in industrial history—holds out the promise of a rich future—prosperous security. But to win it you must be ready. Well-trained men ONLY are wanted.

Examine the National Shop Method of Home Training carefully. Be convinced. Study the lesson we will send you FREE. No obligation of any sort. Fill out the coupon and mail it today.

GET THESE 2 BIG BOOKS FREE!

Learn for yourself just how easy this SHOP METHOD HOME TRAINING gives you the practical, down-to-earth experience you can never get from theory alone.

NATIONAL SCHOOLS

LOS ANGELES 37, CALIFORNIA EST. 1905

MAIL OPPORTUNITY COUPON FOR QUICK ACTION

National Schools, Dept. S-PP
4000 South Figueroa Street, Los Angeles 37, California

(Mail in envelope or paste on penny post card)

Mail me FREE the two books mentioned in your ad including a sample lesson of your course. I understand no salesman will call on me.

NAME..... AGE.....

ADDRESS .....

CITY..... STATE.....

Include your zone number

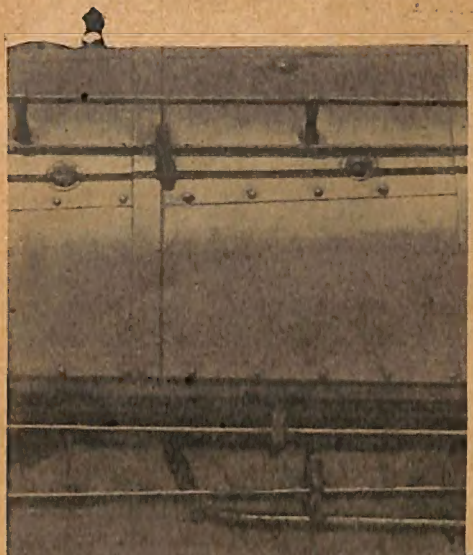
Photo Courtesy Baltimore & Ohio Railroad

WESTBOUND extra 7607 has just clanked into Terra Alta, West Virginia, with 4500 tons of war freight. Not a heavy drag by flatland standards. But if you ever put 'em over the Baltimore & Ohio's seventeen-mile grade, at the western end of the Cumberland Division, you'll give the big lady at the head-end her due. For at few points along the green forested spine of the Appalachian chain has Dame Nature troweled up a tonnage barricade with less regard for the feelings of an ambitious operating department.

It takes more than wishful think-

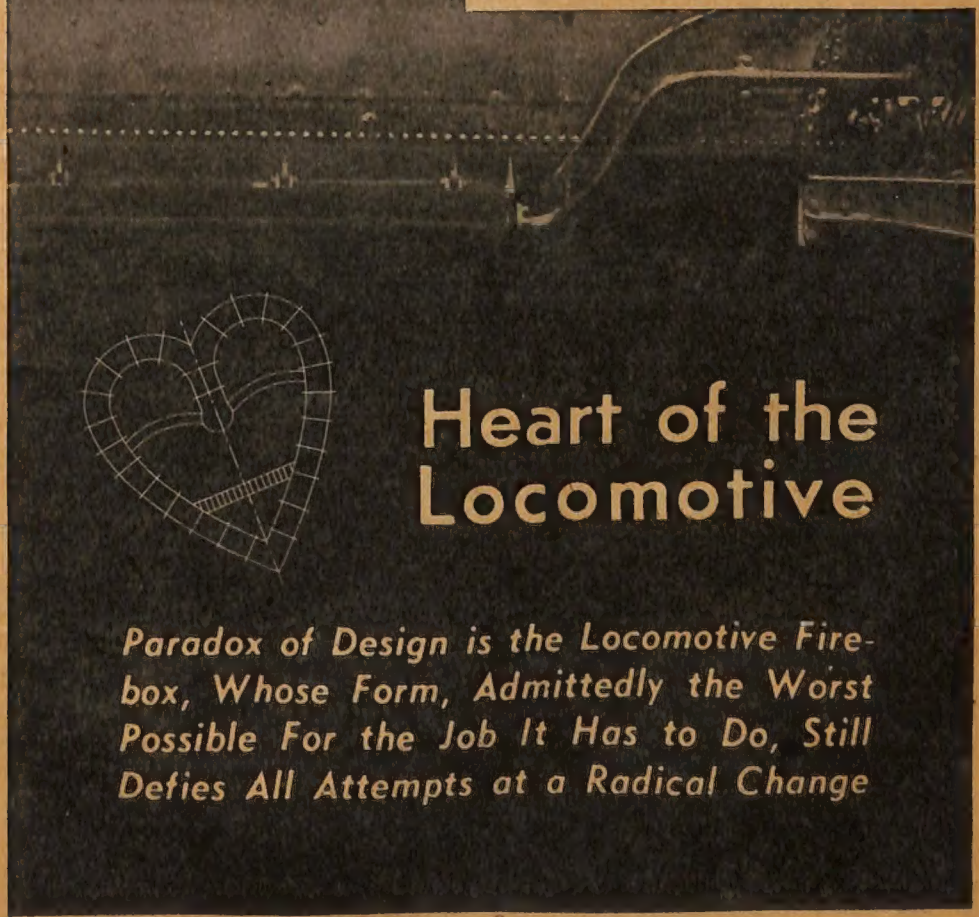
By HENRY B. COMSTOCK

Editor, Railroad Magazine



ing and a standard railroad watch to lift 4500 tons a fourth of a vertical mile in sixty minutes. Seven thousand gallons of water and eight tons of coal will just about do the trick, given a simple articulated machine like the 7607.

Behind the long barrel of that 2-8-8-4 is the center of the huge, swift-acting circulatory system which converts these vast amounts of fuel and liquid into pulsing steam power. Enginemen call it the firebox; designers, the *heart of the locomotive.*



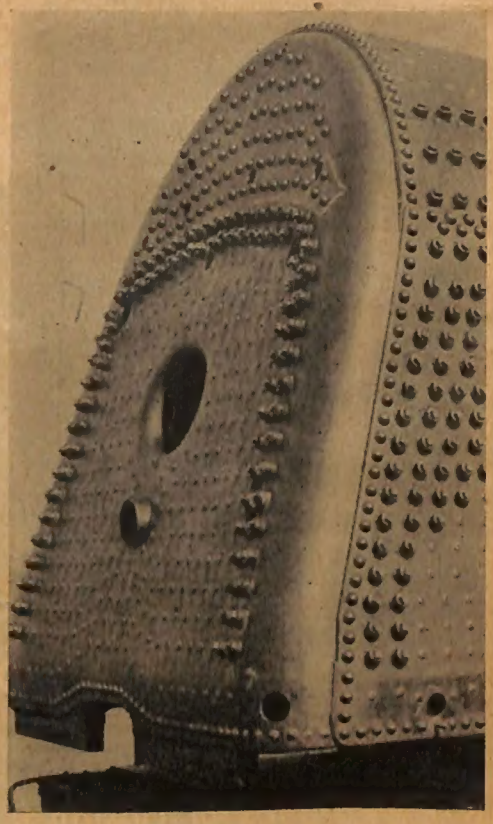
Heart of the Locomotive

Paradox of Design is the Locomotive Firebox, Whose Form, Admittedly the Worst Possible For the Job It Has to Do, Still Defies All Attempts at a Radical Change

Photo by Bruce D. Fales, 1915 Elkhart Street, Silver Spring, Md.

TOP of the B&O's "big hill" is Terra Alta, W. Va. Blockade buster 7618 waits at the point

AT RIGHT: Heart of the Baldwin-built 2-8-8-4. It would take a furnace running the full length and breadth of a hollow cylinder ten feet in diameter and approximately three hundred and fifty feet long to supply heating area equivalent to that of this firebox and its boiler

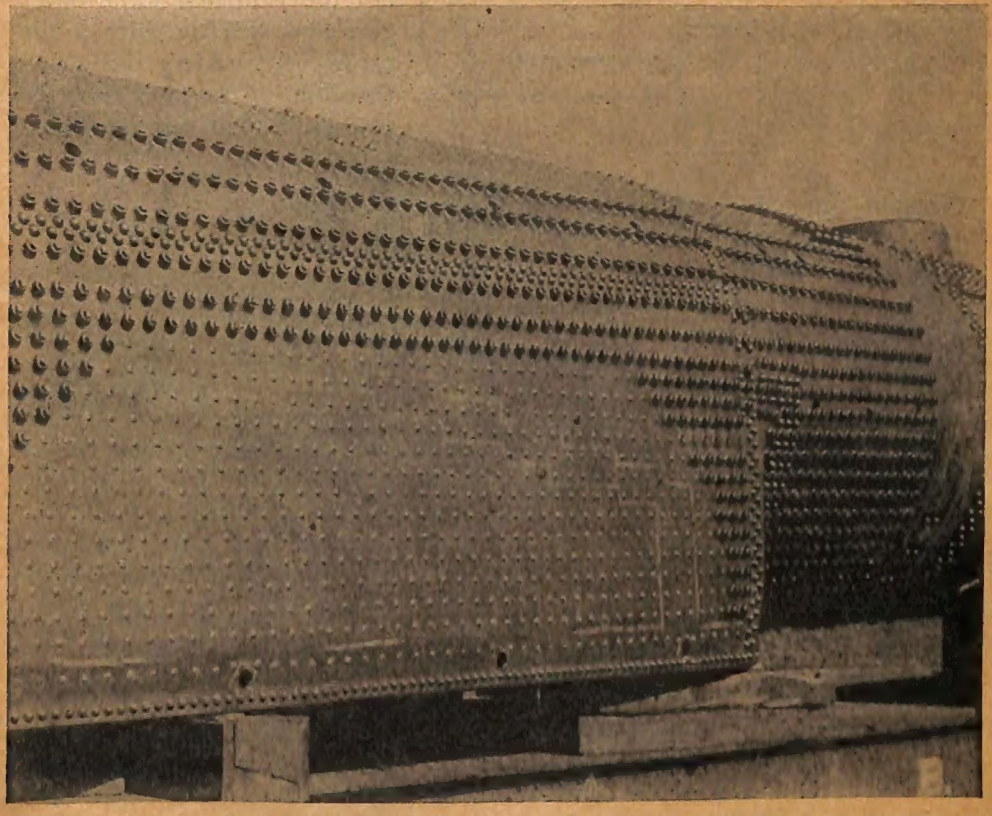


Let's have a look at this "heart." It's a fitting one for such a behemoth —more than twenty-five feet long, including a cylindrical extension at the front called a combustion chamber. Its grate measures fourteen feet nine inches by eight feet; and the inside height to the steel roof, or "crown sheet," is a good six feet three. In short, you could sit twelve persons down at a commodius dinner table in this metal box—provided you had the ration points.

This is the inner lining of the giant's heart, which has still another steel shell outside it, with some twenty-five hundred staybolts holding the two in pressure-resisting alignment. Between the metal walls, and forming a six-inch blanket above the crown sheet, is a surging layer of boiler water. This liquid serves a threefold purpose. It protects the metal surfaces, originates the process of water circulation extending through the entire length of the boiler, and comprises the locomotive's largest single source of saturated steam. For while the firebox represents but eight per cent of the barrel's total heating surface, it

evaporates almost one third of all of the water fed forward from the tender.

To put so large an amount of heat to direct use before passing it on to an arterial system composed of more than two miles of fire tubes, flues and superheater bundles, the heart of our B&O freight engine contains a number of tried and proven aids to free steaming. Sloping up and backward from the forward end of the

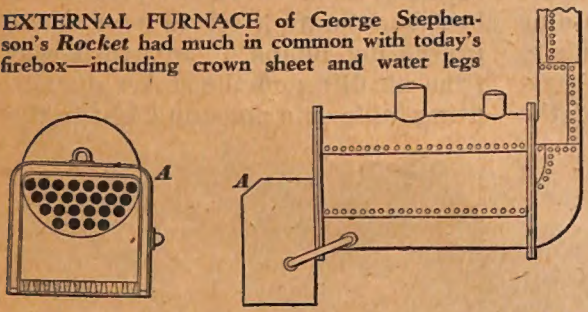


firebox is a low-hung ceiling of firebrick which terminates a little more than half way along the length of the grates, and above the level of the fire door. Put your foot on the treadle which parts the butterfly segments and squint inside when the engine is under draft. Rising from the white-hot inferno on the grates you will see a sheet of flame licking toward you along the brick arch, and curling over its edge in a violent reversal of direction as the stack exhaust draws it forward again and into the tubes. Apart from lengthening the travel of firebox gasses and insuring their more complete combustion, the arch serves as a baffle, preventing lumps of unburned coal from hurdling off the stoker distributing table on a nonstop flight to the stack and Monday morning's washes.

Holding the arch in place are three staybolt-studded water passages shaped like flattened horns of plenty and known as thermic syphons. Their ingenious shape and placement, with the small end piercing the throat sheet and the larger, oblong opening welded flush with the top of

the crown sheet, boosts the rate of water circulation through the barrel, insuring a more even temperature. Too, with a pair of supplementary syphons placed in the already-mentioned combustion chamber, they increase the heating surface of the furnace itself by nearly forty per cent.

EXTERNAL FURNACE of George Stephenson's *Rocket* had much in common with today's firebox—including crown sheet and water legs



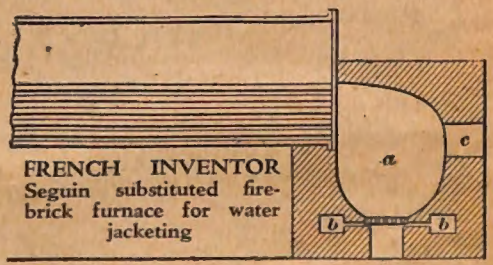
Yes, the modern firebox is somewhat of an engineering wonder. But the most unusual thing about it is the fact that from a scientific point of view it appears the most ill-shaped, illogical, vulnerable mechanism ever subjected to the vicious actions of fire and high steam pressure.

Why, then, does it remain in universal service? The answer is that despite these apparent short-comings it works—and defies all attempts at a major change.

TO CLEARLY UNDERSTAND this paradox, we must bear in mind that theories and practical operating conditions have been pretty generally at odds since the days of Trevithick and Stephenson. Philosophers and scientists of early times knew as well as we do now that a globe presented the most perfect form for resisting inside pressure. They built their first boilers accordingly—only to find that a sphere provided very little heating surface. The compromise which followed took the form of a cylinder, a shape simple in form, strong, and well suited to heat transmission.

Logically, the locomotive builders adopted this cylindrical boiler. For their purpose, though, it had to be made a great deal lighter, and at the same time capable of generating steam ten times as fast as those used in stationary work.

In his awesome, gear-driven engine of 1803, the Cornish inventor Richard Trevithick laid a cylindrical boiler on its side and fed fuel into a furnace extending halfway through it. The heat from the primitive fire compartment



FRENCH INVENTOR Seguin substituted firebrick furnace for water jacketing

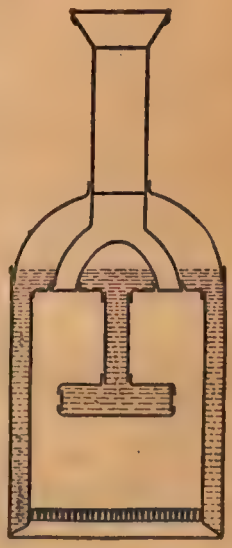
was carried by a return flue through the water section and back again to a chimney beside the firebox door. Ten years later William Hedley applied much the same sort of furnace to the *Puffing Billy*, first locomotive used for the commercial hauling of cars.

At about the same time an ambitious mine foreman named George Stephenson was tinkering with a single-flue engine which had its stack and firebox placed at opposite ends of a horizontal boiler, in line with modern practice. It was a poor steamer, however, and a less persistent craftsman would have been content to fall back on the Cornish boiler design. Not so, Stephenson, who was convinced that he had arranged the parts of his locomotive in their most logical pattern. Failure after failure

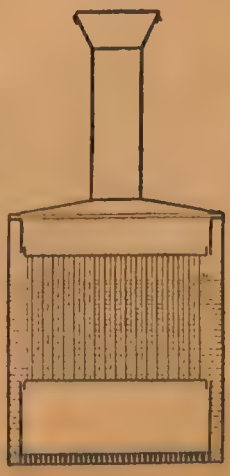
did not weaken the belief and in 1829 his perseverance was at last rewarded by the performance of the *Rocket,* which attained a speed of twenty-eight miles an hour at Rainhill, near Liverpool, while pulling a car containing thirty-six passengers.

Contributing to the success of this engine was a new form of external furnace, or firebox, little different from those in service today. What Stephenson had done was to build two rectangular metal boxes which were placed one inside the other in such a way that a curtain of water was held between their shells. Firetubes extended forward from the heating unit and circulating pipes connected its water walls, or "water legs," as they have since come to be called, with the body of the boiler. A grate, taking the place of a solid hearth, allowed air to pass through the fire, speeding up the rate of combustion.

Then, as now, Stephenson's firebox appeared an open invitation to trouble. Marc Seguin of the St. Etienne Railway of France thought he had a better answer in a detached-chamber furnace, which substituted firebrick walls and roofing for water legs and a crown sheet. Obviously it would be able to withstand higher temperatures. What was not so obvious—until the device was tested on the road—was the impossibility of keeping the back flue from leaking like a sieve under the stresses of the same high temperatures. To make matters worse, vibrations soon shook the rigid brick walls to pieces. Despite Seguin's experience, there were periodic attempts in later years to revive this form of firebox. None enjoyed any degree of success.



B&O cheese boiler got its name from cylindrical water table



Improved B&O boiler had vertical tubes

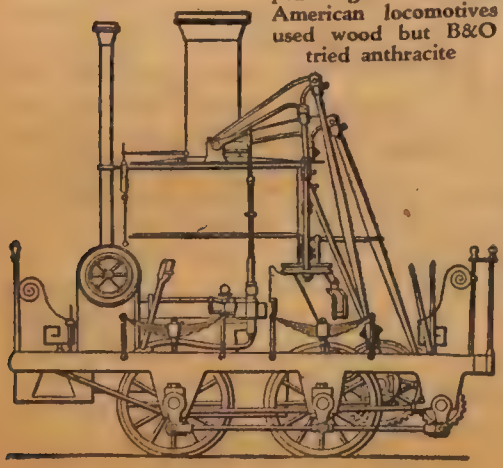
AMERICAN ENGINEERS in 1830 were no more willing than Seguin to accept the *Rocket* as the prototype for succeeding locomotives. They were justifiably proud of their achievements in the field of marine boiler construction, and it was natural that they should think in terms of built-up furnaces of the internal type. In 1825, Colonel John Stevens had built a small locomotive having two vertical boilers, which he ran at his Hoboken, New Jersey, estate, to prove that railroads were practical. Each barrel had a fire chamber surrounded by upright water tubes.

Peter Cooper's *Tom Thumb* and Detmold and Miller's *Best Friend of Charleston* also used furnaces placed beneath vertical boilers and surrounded with water, to generate steam. Designed to burn anthracite, the *Tom Thumb's* fire chamber required an intense draft, which Cooper supplied by means of a revolving, belt-driven fan.

The pine-knot-consuming firepot of the *Best*

Friend, on the other hand, got along well enough without a blower and showed a good rate of evaporation, due in part to a novel arrangement of short metal projections, or teats, which studded its interior, increasing the area of the heating surfaces. Smoke and gas escaped through a number of ports in the sidewalls to an outside jacket shaped like an old-fashioned porter bottle and terminating in a tapered stack. An attempt was made to reinforce the metal top, or crown sheet, of the furnace with iron stays, but it remained the weakest portion of the structure, as a Negro fireboy learned the hard way as he scaled skyward after tying down the safety valve.

MISLED by the performance of Peter Cooper's engine, the Baltimore & Ohio Railroad became a proving ground for all sorts of vertical boilers. Their furnaces were unique and varied, ranging from a large iron compartment which nearly fitted the boiler and had a water drum, or table, suspended within it, to a squat furnace connected by vertical fire tubes with a combustion chamber leading into the stack. The first, or "cheese" boiler arrangement, so named for the shape of the water table, proved unsuccessful due to the amount of mud and scale which accumulated in the suspended unit, causing it to overheat and burn out quickly. The firetube boiler, on the other hand, was sufficiently successful to be duplicated many times over in locomotives of the Grasshopper, Crab, and Mud Digger types. Its system of heat transmission was sound, and had nothing to do with the swing away from upright boilers in the late '30s. It was simply that they were top-heavy and due to the severe vertical action of the driving mechanism and a limited wheelbase, too unstable for smooth running.

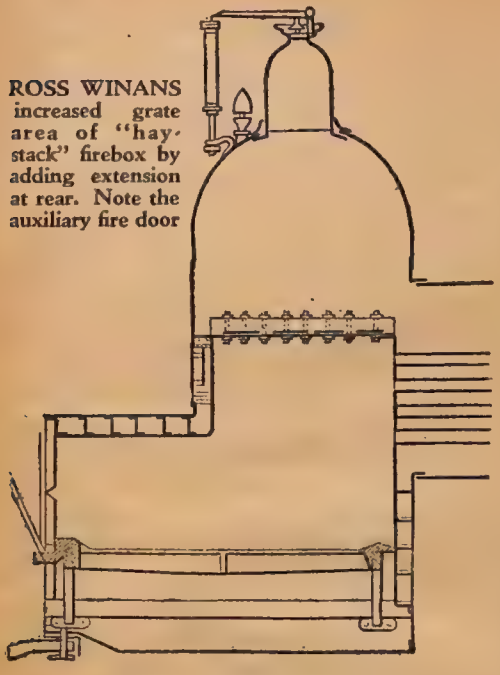


COKE was first European engine fuel. Most American locomotives used wood but B&O tried anthracite

Meanwhile the English inventor, Edward Bury, had worked out a form of heating plant which was destined to have a strong influence on American design. To the rear end of a horizontal firetube boiler he attached an upright, cylindrical firebox surrounded by water and capped by a high dome-shaped boiler extension in which steam was accumulated for the throttle.

On this side of the Atlantic, Matthias Baldwin was quick to see the advantage of the liberal space which the design provided above the firebox, and his second locomotive used the Bury, or "haystack" boiler, as it soon came to be called. Other builders followed his lead. As engines grew larger the circular firebox expanded proportionately, until it reached an outside diameter of five feet in the Reading's powerful freight locomotive *Gowan & Marx,* which pulled a train of one hundred and four loaded coal jimmies between Reading and Philadelphia in 1840.

No early form of firebox enjoyed



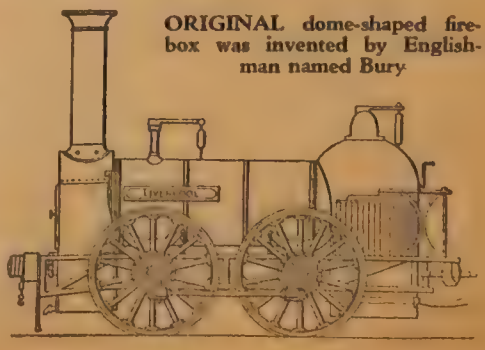
ROSS WINANS increased grate area of "haystack" firebox by adding extension at rear. Note the auxiliary fire door

more widespread popularity. Its only drawback, and the one which eventually led to its being discarded, was the limitation placed upon its grate area by a circular contour. Ross Winans, the horsetrader who turned locomotive builder when the B&O swung over to steam operation, tried to remedy this condition in a group of four anthracite-burning engines which he constructed for the Philadelphia & Reading in 1846, by extending a rectangular firebox section back of the dome. The arrangement required two firedoors—one set at the base of the "haystack," through which the fireman fed fuel to the forward end of the grate; the other placed on a lower level, at the base of the extension. The total grate area, amounting to seventeen and one-half square feet, projected behind the driving wheels and wagged the locomotives so violently that they were barred from service until pony wheels were placed under their footplates.

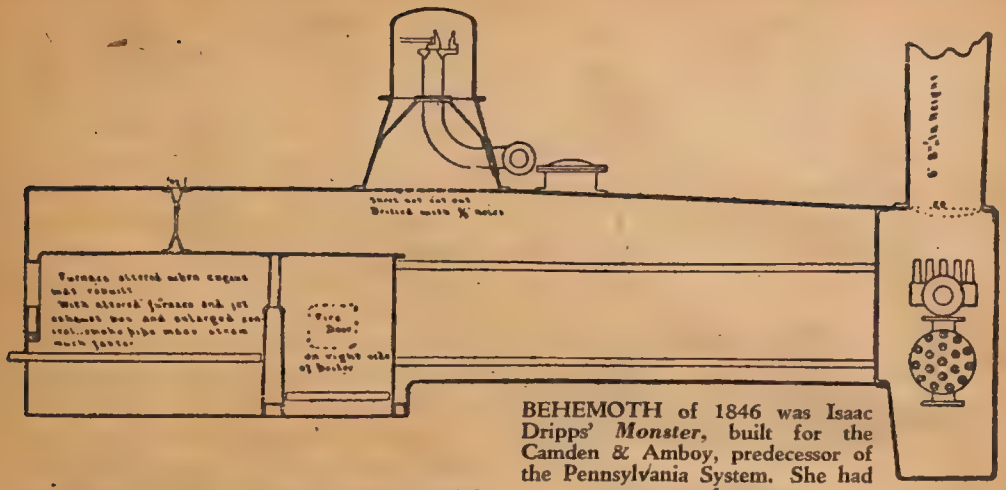
While Winans was working on this design, G. A. Nichols, of the P&R, approached the problem from a radically different angle. Believing that it was impossible to place a boiler assembly of really large capacity above the driving mechanism of an engine, he designed an independent heating and evaporating plant, behind the locomotive proper. The tallowpot fed the large internal furnace—it had a grate area of thirty-six square feet—through a fire door at the rear. Steam, discharged from the cylinders, drove a blower in the ash pit.

The *Novelty,* as this queer contraption was appropriately called, turned out to be a dismal failure. She could not be stoked while the draft fan was working, without pelting the fireman with live coals. Consequently, when she was not slipping her drivers for want of adhesive weight, she could generally be found stalled between stations, waiting for steam pressure to build up.

FREQUENTLY, when machinery is undergoing evolutionary changes, a design far in advance of all others will go practically unnoticed in the general shuffle. Thus, when Isaac Dripps, Master of Machinery for the Camden & Amboy, built a group of engines for that railroad in 1832, no



ORIGINAL dome-shaped firebox was invented by Englishman named Bury



BEHEMOTH of 1846 was Isaac Dripps' *Monster*, built for the Camden & Amboy, predecessor of the Pennsylvania System. She had two sets of grates

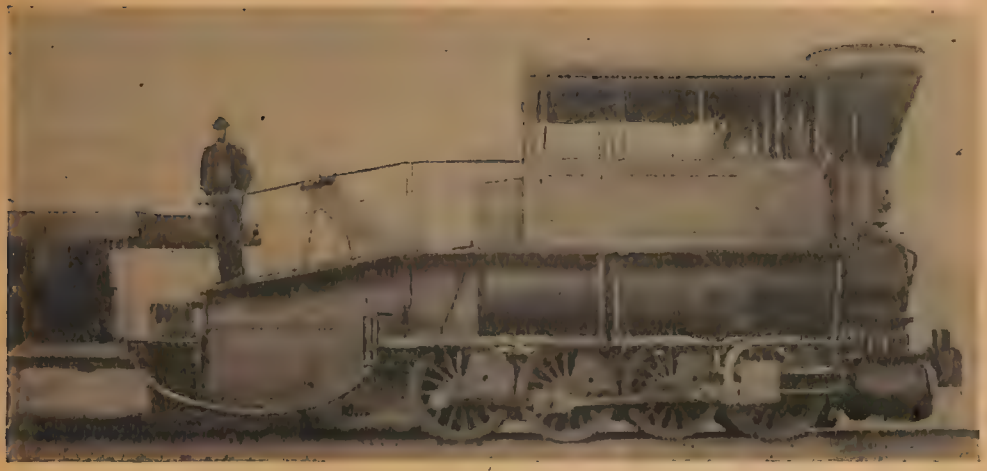
one was particularly impressed with the variation of the Stephenson firebox which he applied to their boilers. Yet it was nearly identical, in its general shape and interior arrangement, to those in use today.

Unlike the haystack type, its top continued on the same plane as the barrel ahead, and was curved to match its contour. The water legs sloped outward at the bottom, as did the backhead, and it had a small combustion chamber, reaching into the boiler. The purpose of this extension was to allow gasses to fully ignite before they entered the flues. To prevent the crown sheet from buckling, X-shaped stays called crowfeet connected it with the outer shell.

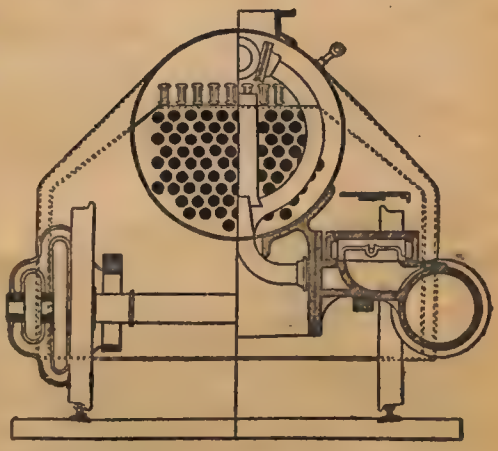
Dripps, himself, failed to appreciate the beautiful simplicity of the design and three years later, while working on plans for what was to be the world's largest freight engine, he attempted to place a bridge-wall or water space across the opening between its furnace and combustion chamber. This obstacle limited the passage of gasses from one to the other to a thirteen-inch opening just below the crown sheet, with the result that the engine steamed badly and had to be withdrawn from serv-

FAR CRY from the *Monster* is Pennsylvania's T-1, whose 92 square feet of grate area is stoker-fed through Archimedes-screw conveyor and elevator pictured here

Photograph from Lt. Commander Matthew A. McGrail, U. S. Navy



LONG, sloping fireboxes of B&O *Camels* gave them the wobbly gait of an old man walking upstairs with his hands in his pockets. They were stoked at two levels



AT RIGHT: Zerah Colburn recognized the advantages of a wide firebox; particularly when burning hard coal. With Millholland he shares credit for extending grates beyond the limits of the track gage. His *Lehigh* was built for the Lackawanna in 1855

ice, and her boiler rebuilt.

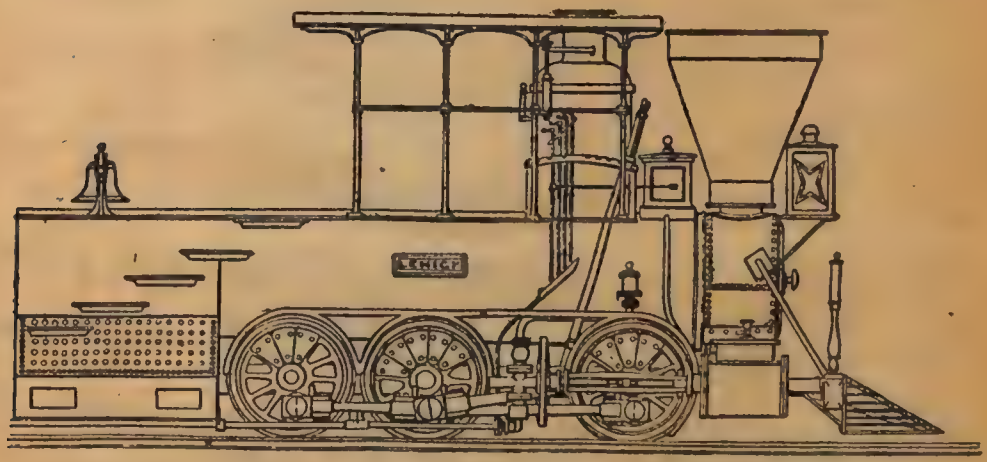
This was done by changing the combustion chamber into an auxiliary furnace with its own set of grates and an independent firedoor, set in the side of the right water leg. Obviously it was impossible to replenish the coal supply in the forward chamber when the engine was moving. Yet for all its complicated design, the remodelled *Monster* and her three sisters saw useful service until 1875.

As we have already said, it was some time before other builders recognized the virtues of the Dripps boiler. Meanwhile hundreds of the Bury pattern were constructed. Other manufacturers, most of them European, turned to a simple, square firebox whose side sheets stood considerably higher than the top line of the boiler. This pattern gradually lost favor when it was found that the abrupt rise made for a weak spot at the waist.

BIT by bit, as the little arch-backed firebox of 1832 gained new adherents, its various construction features were standardized. Copper became the accepted material for inside water walls and crown sheets, while the outer shell was of iron. Stay-bolts reinforced the water legs and crown bars stiffened the top of the furnace. These last were heavy

iron rods, placed edgeways along the upper surface of the sheet and bolted to it, with washers sandwiched between the two surfaces to allow free circulation of water over the greater part of the vulnerable copper. Sling stays, suspended from the top of the outside shell, were a further insurance against collapse.

The coal or wood used as fuel rested upon deep bars of iron, placed close together to form a grate. A few builders, including William Norris, attempted to substitute water pipes. Others alternated tubing with solid



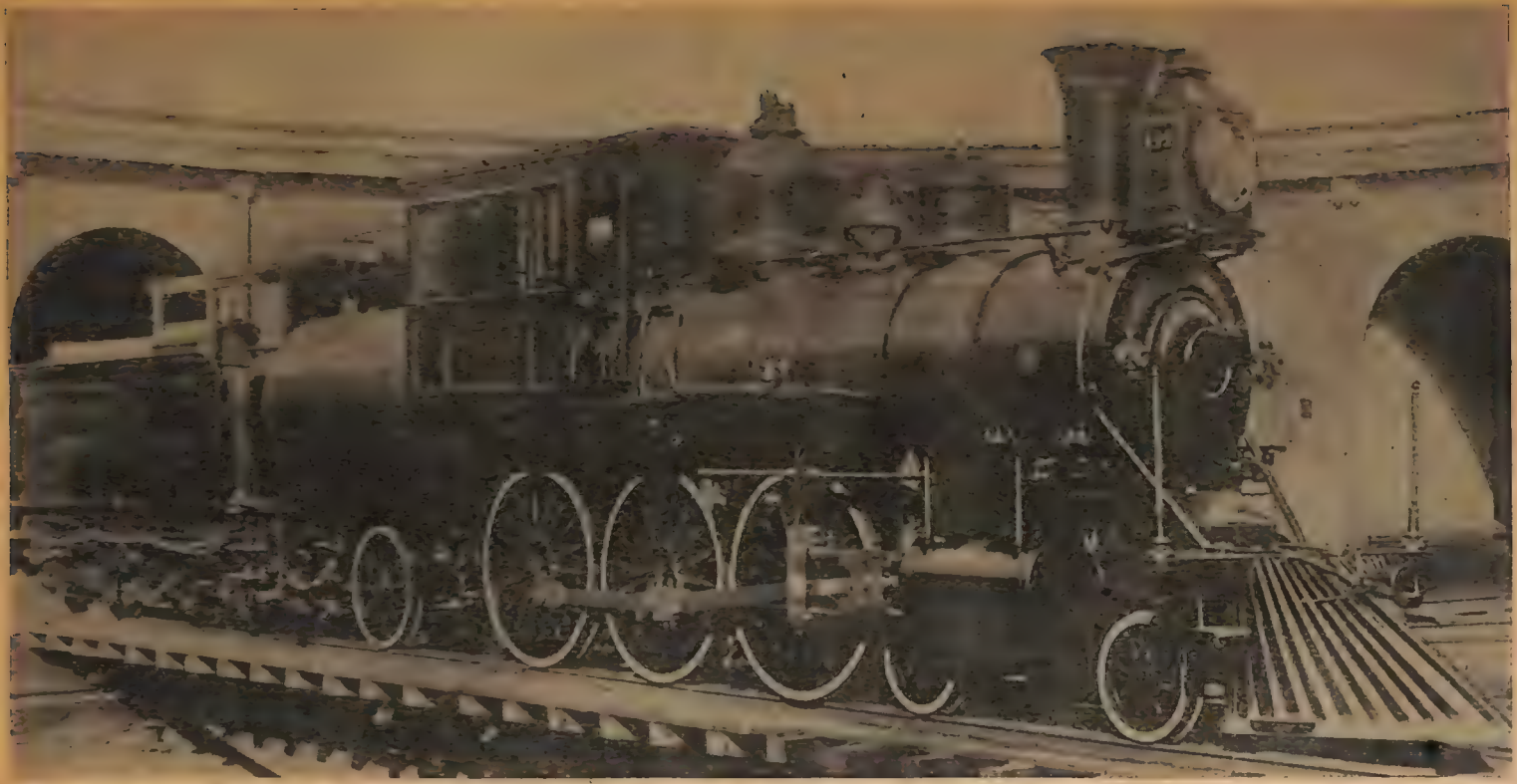
rods, but both designs leaked badly.

Down on the Philadelphia, Wilmington & Delaware Railroad, a mechanic named Dimpfel extended a combustion chamber all the way through the barrel of a locomotive and placed a water tube bundle inside it. The pipes entered a drum at their forward ends and curved gracefully upward and through the crown sheet at the rear. The resulting circulating system was successful to the extent that with careful nursing it performed nearly as well as a conventional fire tube job. Its main weakness was the tendency of the tubes to burn out quickly—a characteristic of all water tube boilers built before and since.

It was natural for motive power men to seek an even greater number of ways to use the heat of the fire for faster evaporation. We have seen how Isaac Dripps built a bridge wall across the throat of the *Monster's* combustion chamber. Numerous engine builders experimented with similar water compartments placed in every conceivable part of the furnace. There were cross walls and "mid-feather" partitions which ran down the center-line of the firebox; reservoirs suspended vertically and horizontally. By and large they were failures, yet the germ of an idea was there, waiting to be developed into today's syphons and circulators.

Twin firedoors were frequently needed to reach all sections of the grates. And as fireboxes grew ever longer, it became common practice on many roads to extend them completely through the cabs. In such cases, they had to be fed from the tender deck.

THUS far, no attempt had been made to widen the furnace. It still remained an oblong box, con-



WORLD'S FIRST Pacific type locomotive, Lehigh Valley's ***Duplex*** got her name from the two cylindrical fireboxes, placed side by side and leading through a breeches pipe to a combustion chamber. Inner walls were corrugated, permitting free expansion and eliminating staybolts. Of her performance, contemporary motive-power expert Angus Sinclair observed dryly: "She demonstrated clearly what can be expected when an amateur sets out to design a locomotive"

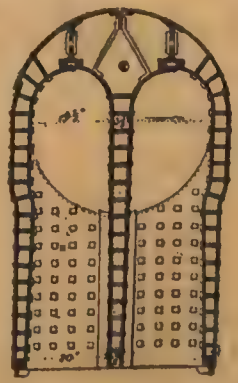
fined within the frames. But a young inventor who had assisted in the building of Peter Cooper's *Tom Thumb* was destined to change that. His name was James Millholland. Appointed Master of Machinery of the Philadelphia & Reading in 1848, almost his first official act had been to scrap Nichols' *Novelty*. From that excellent beginning he slanted the greater part of his efforts toward the production of bigger and more powerful engines than any of those turned out by his contemporaries.

Then, as now, the P&R had a wide and varied assortment of locomotives. After building one orthodox six-wheeler, Millholland took a Baldwin 4-4-0 named the *Warrior* and made a radical change in her firebox. Carrying it past the rear set of drivers, he allowed the grates to spread out beyond track gage, materially increasing the firing area. No less than three doors pierced the boiler back head, one being placed on a level with the grates; the other two above it, for firing.

Photo from Railroadians of America

CAB INTERIOR of a Grant locomotive of the Seventies, showing small breadth of firebox. Note ports in back head

If he had not handicapped the performance of his wide firebox with a number of other and less practical construction features, it would probably have gained earlier recognition than it did. Unfortunately Millholland shared the belief of practically all scientific engineers of the period that to make for proper combustion, air, air, and still more air must be funneled into the furnace. Hence his use of two combination chambers in a specially patented boiler. The first of these, located in the usual place, just ahead of the firebox, was perforated with air holes and called a mixing chamber, while the other was placed beyond it, with an intervening honeycomb of large fire tubes. As might have been expected, the effect of the arrangement was to practically blanket the fire with cold air.



MIDFEATHER was a common feature of locomotives built in the Seventies and Eighties

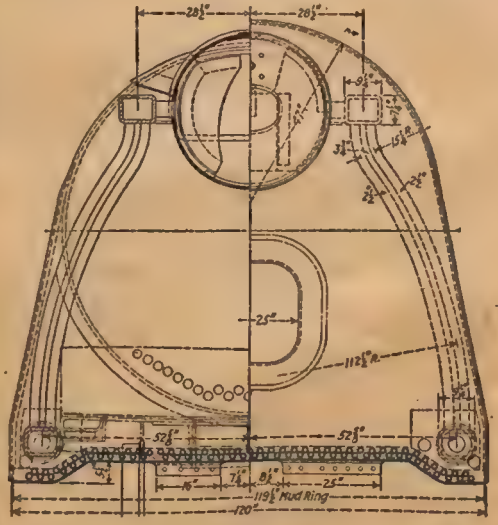
Shortly after the efforts just described, another motive power expert recognized the need to free the furnace from its narrow confines. He was a self-taught down-Easterner, Zerah Colburn, who probably did as much as any practical designer of his day to correctly evaluate

developments in the field of locomotive construction. With this talent he combined a flair for writing which made his technical papers read as entertainingly as fiction. In addition, he was one of the finest draftsmen in an era famous for the excellence of its mechanical drawings.

These talents came into full play in the editing of *Colburn's Railway Advocate,* the *Engineer,* and *London Engineering.* But not before the New Hampshire genius had completed for the Lackawanna, in 1855, a group of anthracite-burning locomotives having fireboxes seven and one-half feet wide placed entirely behind their rear drivers. Lift the whole boiler assembly of one of these engines, extend the frame under the firebox, and place a pair of drivers or trailing wheels beneath it, and you have a reasonable facsimile of the present-day locomotive.

That is just what Millholland did two years later, in 1857. The machine was the *Vera Cruz,* first locomotive ever to have her furnace raised entirely above the level of the engine bed.

FROM that day to this, there has been no major improvement in the form or general arrangement of the



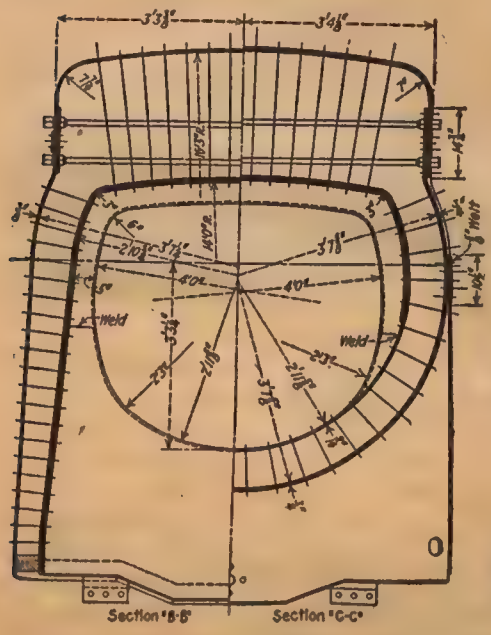
CROSS-SECTIONAL VIEWS of three types of modern firebox. Left to right: Emerson water tube design, showing banks of pipes rising from circulating tubes to centrally located drum which advances hot water and steam to the boiler proper. Belpaire firebox, the curve of whose outer shell conforms to that of the crown sheet, eliminating uneven stay bolt stresses. Conventional design, with crown sheet supported by flexible staybolts

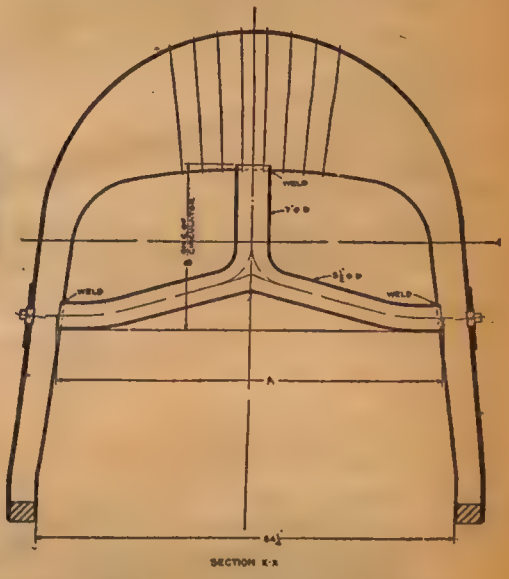
BELOW: B&O's former Chief of Motive Power, George Emerson, expected great things of the 5510's water tube firebox. The big 4-8-2 did a good job with the ***Capitol Limited*** and other blue-ribbon flyers, but proved costly to maintain

Photo by Bruce Fales, Silver Spring, Md.

locomotive firebox. The wide and shallow Wootten design, which led to the placement of the engine cab ahead of it and the application of a windbreak or fireman's shelter at its rear; the neatly shrouded furnace of the modern streamliner and the monstrous heating plants of freight and passenger engines boasting six-wheeled trailer trucks—all of these are its direct descendants. Performance, and not science, had shaped the heart of the locomotive.

Had designers been content to accept Millholland's pattern three-quarters of a century ago they might have spared themselves a great many disappointments. But its apparent shortcomings have always been an invitation to change. In 1886 George S. Strong of the Lehigh Valley tried to apply a Fox marine furnace to the first Pacific type locomotive ever built. This Fox design was nothing more or less than a large corrugated flue, placed entirely within a cylindrical water jacket and having sling stays at its forward end to hold it in position. Its advantage was that it could "breathe" under temperature changes and eliminated the need for stay bolts. Strong's engine, built at Wilkes-Barre, Pennsylvania, used two Fox units placed side by side and extending through a breeches pipe to a common combustion chamber. Each cylinder was approximately forty inches in diameter and eight feet nine inches long. The arrangement looked good on the erecting cards, but little was heard of the *Duplex* herself, after the first flurry of enthusiastic predictions. The fact was that she performed no better than conventional engines costing a third as much to build and she soon went the way of a great many other noble experiments.



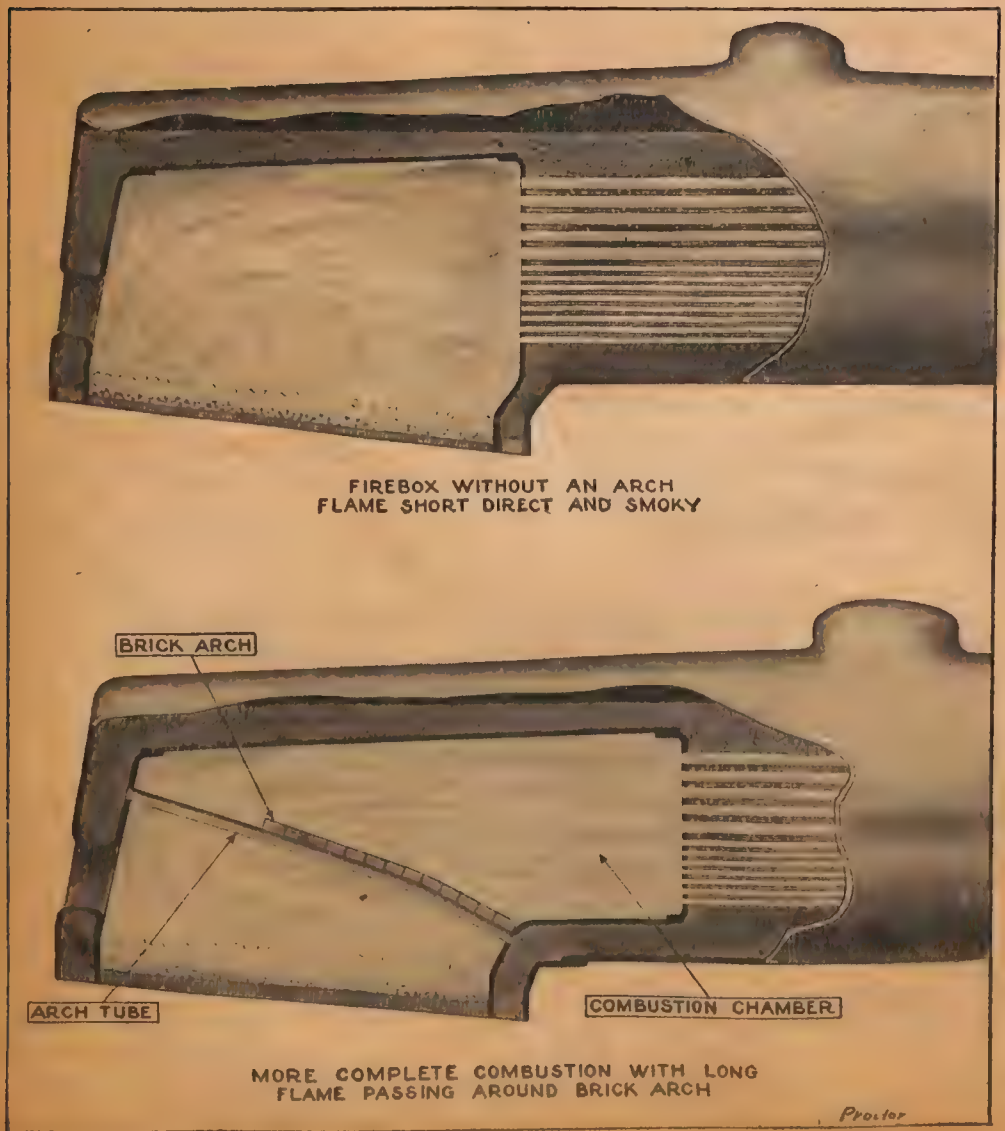


A more efficient corrugated firebox was invented and built by Cornelius Vanderbilt in 1899. This New York Central design made use of a single furnace and, oddly enough, succumbed to its own efficiency. Where-

as the strong engine had been intended to burn anthracite, Vanderbilt's firebox was particularly well adapted to liquid fuel and made steam so freely that the locomotive was frequently forced to perform double service, as a result of which the sheets became distorted from excessive heat.

The possibilities of the water tube firebox have always claimed the attention of high-pressure engine enthusiasts—designers like Muhlfeld, Emerson and McClellan. John A. Muhlfeld, who in 1904 had been responsible for American acceptance of the Mallet compound design, devoted the greater part of his later years to unsuccessful work in this field, with the full support of the Delaware & Hudson Railroad. His

Horatio Allen, John B. Jervis,

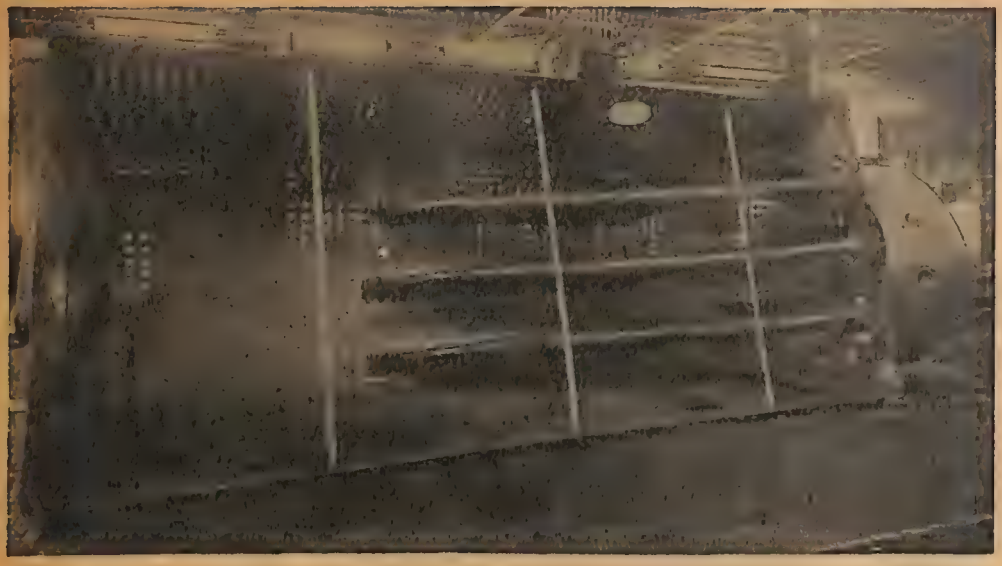


FIREBOX DRAMA. When section of grates on Rio Grande 4-8-4 Number 1801 dropped into ashpan, threatening to delay troop train at Midvale, Utah, fireman Warren J. Keefer and Engineer David C. Bronson braved flames and deadly gas in white-hot inferno to replace them. Each was awarded ten merit marks for heroism

James Archbald, and *L. F. Loree*— all Consolidation engines — substituted vertical banks of water tubes for conventional water legs. These pipes, more than three hundred in number, ran into horizontal drums at top and bottom, the drums themselves forming a direct connection with the boiler ahead.

George Emerson, who for many years shaped the progressive motive power policy of the Baltimore & Ohio, varied the arrangement by substituting large diameter piping for the drums at the bottom of the tubes and in his later engines used a single connecting chamber at the top of the firebox. The McClellan design, applied to the New Haven's R3a class, added banks of upright piping at the backhead, providing three water walls, with an overhead drum for each. In all cases, heavy lagging and insulative cement formed a protective wall between the tubing and an outside metal shell.

It is unfortunate that these efforts, along with those which the Baldwin Locomotive Works expended on its experimental *60000,* and New York Central and American on the 800, should have borne so little fruit. Like Dimpfel's early experiments on the Philadelphia, Wilmington & Delaware, they have none of them measured up to expectations.



LESS conspicuous engineering work, however, has done much to improve and refine the existing firebox. As might have been expected, iron and then steel took the place of copper for the inside walls and crown sheet, while crown bars gave way to stay bolts. By looking at the drawing of the conventional boiler drawing on page 23 you will see that a peculiar problem arises here. Since the crown sheet is nearly flat, bolts of varying lengths must be used to reach it from the rolled top of the boiler. That means that under firebox temperatures they will show an uneven amount of expansion and a means must be provided to give them flexibility. For a time a type of stay bolt having two slots milled through it at right angles to one another was widely used. But while it flexed more readily than a solid stay bolt it had a tendency to twist and fracture in the process of threading. Eventually a flexible design having a solid shaft and a ball head which is free to twist and turn in a special socket took its place.

Over in Europe a Belgian inventor named Belpaire worked out a form of boiler which successfully eliminated the problem of unequal expansion. By flattening that section of the outer shell directly above the crown sheet so that it conformed with the shape of the latter, he was able to use stay bolts of equal length. In addition, a nearly vertical extension of the water legs permitted cross stays to be run between them.

This Belpaire design is costly to manufacture, but two of our leading railroads—the Pennsylvania and the Great Northern—are well satisfied that it is worth the additional expense.

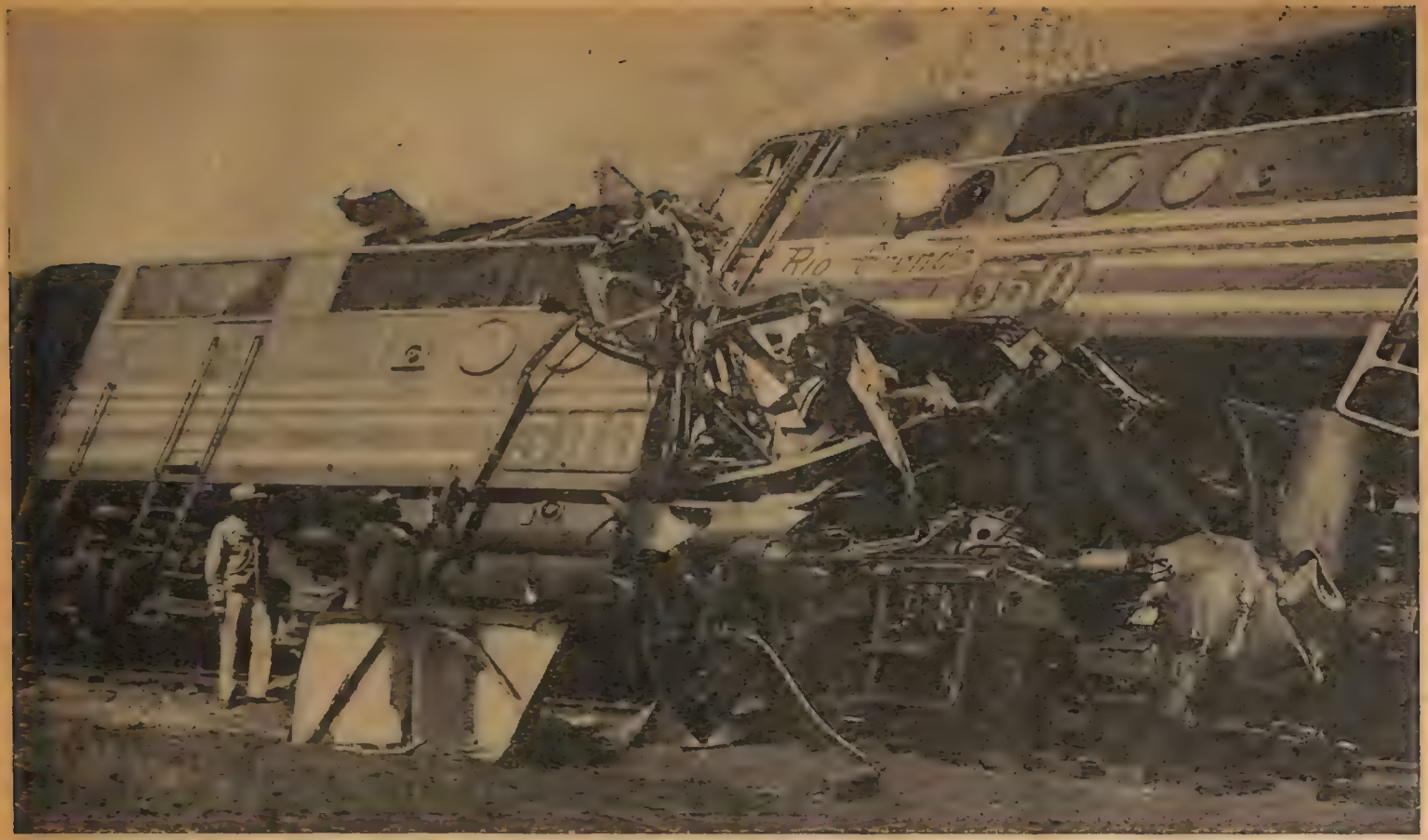
AS THE FIREBOX is the source of locomotive heat, so too it is the cause of a clean or dirty exhaust. Nearly every superintendent of early motive power at one time or another designed a "smoke consuming" furnace. Common sense, as much as city ordinances, prompted such inventions. For a black exhaust has always been an indication of poor blending and ignition of gasses, resulting in a waste of fuel.

Isaac Dripps' combustion chamber was a step in the right direction. Another and equally important one was the designing of the brick arch, by George S. Griggs, in 1857. Griggs, who ranked as the foremost New England master mechanic of his day, hit upon this simple device in the course of experiments with a Boston & Providence locomotive being converted from a wood- to a soft coal burner.

His first "arch" was a shelf of cast iron, suspended beneath the tubes and filled with fire brick. The metal quickly burned away and so did the sections of angle iron with which he replaced it. A T-bolt supported partition solved the difficulty. It worked so well, in conjunction with the diamond stack which he evolved, that the road made a complete change-

OPPOSITE PAGE: Ashcat's view of inner furnace, showing thermic syphon placement and combustion chamber. A product of Baldwin's boiler shop, she converts New River Coal into Hudson-type horsepower for the C&O's *George Washington*

BELOW: Combustion chamber ahead of this Northern Pacific furnace permits full blending and ignition of gasses before they enter flues; holds down the length of such piping, insuring effective heat conductivity



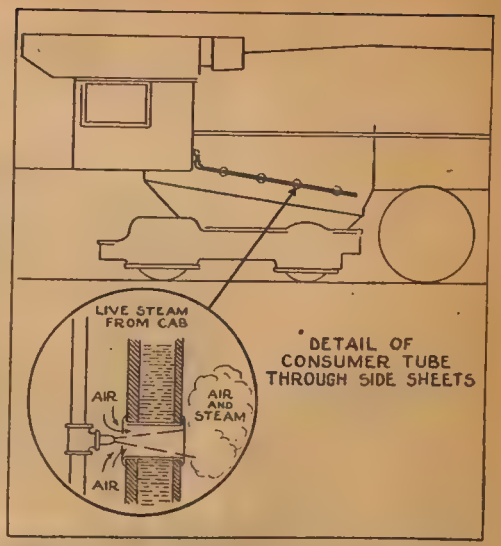
NO FIREBOXES, no smoke signals—a cleanup job for the Rio Grande. Four-unit Diesels met head-on in Spanish Fork valley recently, with results more dramatic than fatal. Both engine crews saved themselves by jumping

over to bituminous, reducing fuel costs approximately twenty-seven cents per train mile.

The policy, long in use on stationary boilers, of introducing air into the firebox directly above the coal, suggested further possibilities in the way of whitening locomotive smoke. Tallowpots noticed, for example, that when they opened the fire door and held a shovel blade downward to examine the bed of coals, black smoke rushing toward the flues showed a tendency to clear. This led to the practice of using perforated doors with baffle plates. One enthusiastic technical writer elaborated upon the principle by recommending no less than four thousand small holes in the back walls of the firebox. Later, many roads admitted air through the water legs by means of hollow staybolts.

S. H. Head, of Boston, tried another tack. Mindful that the exhaust was blackest when fuel was being fed to the grates, he built a firebox divided at its center by a water wall, or mid-feather, and having two fire doors. At the front of the mid-feather was a semi-circular, hinged damper which could be swung in either direction to completely shut off one fire chamber. The idea was to close whichever half of the furnace was being stoked. But enginemen quickly grew tired of adjusting the damper and the Head furnace passed quietly out of the picture.

Recognizing another source of black smoke — the building of a new fire when an engine is not under natural draft, the eminent English engineer, D. K. Clark, directed jets of steam into perforations spotted at intervals along each flank of the furnace. The vapor carried turbulent currents of air along with it, which



SMOKE CONSUMER, consisting of steam jet-driven air blast, gained widespread publicity recently

speeded up combustion and produced a nearly transparent exhaust. Modifications of this Clark over fire jet have appeared at intervals for more than ninety years. But they all give rise to banshee shrieks and wailings which make conversation or the calling of signals within the engine cab all but impossible. Recently, however, this disagreeable and dangerous condition is reported to have been eliminated by a Louisville & Nashville-sponsored smoke consumer, which has jet silencers located outside the engine.

The energy and expense devoted to the development of such devices indicates an endless attempt on the part of motive-power departments to obtain maximum performance from a given amount of fuel. Last year locomotive fireboxes consumed more than five hundred and sixteen million dollars' worth of coal and oil. That is a staggering figure—and the greatest incentive yet to go on improving the *heart of the locomotive.*

By WILLIAM L. ROHDE
Furloughed Train Dispatcher, Pennsylvania Railroad

WHEN Charlie Patterson moved his two hundred pounds into the cab of the streamlined four-unit Diesel he thought life was perfect. It had taken him twenty years to bid off the head end of the *Rocky Mountain Ram,* but he believed every hour had been well spent. Twice he had come very close to holding one of the precious jobs, but each time Jackson Bates had topped him, exercising rights of the oldest engineer on the roster. Now Bates was gone to glory, after a brief illness, and his run was claimed by his old rival.

No one deserved the job more. For years Charlie had watched *The Ram* as she roared by lesser trains on the main line. He'd seen her power change from squat, ugly ten-wheelers to beautiful Mountain types weighing over four hundred thousand pounds. Later on he had waited anxiously as the Diesels were tried out and then adopted for the fast train.

Now she was his, though not completely, for along with her the engineer inherited Bates's old fireman crony, "Jigger" Jensen. Jigger was a conscientious railroader who loved the run almost as much as Charlie, and he spent the first day telling the new engineer on *The Ram* what a great guy his previous hogger had been.

"There was a man!" he said, as they sat together at dinner in Los

Too Perfect

Day After Day the New Man Was Told What a Great Guy His Predecessor Had Been

Angeles, at the Barker House. "One of the best runners I ever knew!"

Charlie kept his eye on the table as he dug into his cantaloupe and ice cream, considering his reply. All day long he had heard nothing but Jackson Bates. At the lunch counter before they left for the yard, the waitress had wasted her usual chatter with the fireman in mourning poor Mr. Bates. After a full day's work Jigger was still at it.

"I didn't know him very well," said Charlie. "We saw one another once in a while, but I never worked with him." Not quite knowing what

to say, he gave the fireman an opening. "How is he to share the cab with?"

"Swell!" and Jigger was off again, telling the merits of his late departed friend. "Always looking after a fellow; doing everything he could to lighten your work. Once when I was taken sick, he handled the job for the last eighty miles with me laying on the deck, and he never said a word to anyone nor reported it."

That was nice, Charlie pondered. But it wouldn't have been so fine if Bates had made a bad move with eight thousand tons of freight in *The Ram*. Both of you would have been canned because a soft-headed throttle artist thought more of saving himself trouble than he did of protecting his train.

Then Charlie mentally rebuked himself for not thinking it was noble to risk your job and perhaps your life to get a friend home. Still, he couldn't help wondering if it wouldn't have been better to get the patient to a doctor and call for a relief fireman.

After several weeks on *The Ram*, Charlie Patterson found himself more attached to the train than ever. Now that he knew her idiosyncracies, he could ease her through the twisting mountain country with confidence; but a flaw continued to disturb his routine. Over every mile, on every run clicking under the driving wheels, Charlie felt he had unwanted company. The spirit of old Jackson Bates seemed to ride the cab with him, watching his moves and politely censoring every action.

When he started a little roughly or pinched her down too much on a doubtful grade, Jigger would look at him reproachfully. On several occasions conductors made him furious by remarking what an easy runner Jackson had been. You could leave the coffee pot on the buggy stove, forget to brace yourself against the wall of the caboose for every start, when Bates had been in the cab.

As a result, Charlie began to try too hard. Yet he knew that when you lose your delicate sense of feeling for a train and try to shepherd her along with touch alone, you are losing the master secret. His starts became more jerky, and they often lost time as he tried to match the moves which Jigger insisted were perfect as practised by the past expert. When they dropped several minutes on the erratic reverse curve between Santos wye and Abbott's Canyon, the fireman would look reprovingly at his engineer.

"We used to let her out on that curve," he'd say. Next time over the section, Charlie would let her out too much and have to use plenty of air before they whipped into the pretzel turns over the divide.

Before long, Charlie felt he knew Engineer Bates better than anyone else had known the man, except Jigger. He learned what old Jackson had liked to eat, what he had said on certain occasions, how he felt on politics, women and even CTC. Jackson distrusted the new radio-telephones, he discovered. When one appeared in *The Ram's* cab, Charlie guiltily let it alone after once trying to demonstrate its operation to Jigger and hearing the echo of the dead man's words.

JULY heat closed in on *The Ram* as Charlie eased her out of the yards on to the main line. He raised his arm to the tower man at Santos as they thundered past, clattering the switch rods where they ran under the

base of the tower. Summer air whirled through the cab. Charlie felt the same thrill he had always experienced when he handled his engine and knew she was taking hold. Turning to the road foreman of locomotives, who was making the trip, he grinned.

"Great piece of power!" The hum of the generator was so loud he had to shout. "Ought to have a good run today."

Sidney Dooley, the road foreman, smiled back at him. Mr. Dooley was the product of hundreds of cabs, and he sensed how the engineer felt.

"Best ride in the world," he replied.

The brass hat sat back listening to the growl of the engines as Charlie drove and eased, coaxed and commanded the heavy motors to haul their pay load through the mountains and then across the short plain. The miles clicked by easily, and it seemed a short time until they approached Los Angeles. Easing into the terminal, they left the engine to new masters, and visited the city.

Charlie and his boss cleaned up in the latter's hotel room and then went down the old-fashioned curving staircase to the quiet dining-room. The official was in a talkative mood.

"Nice run, Charlie," he said as they moved toward a side table. "You're what they call a born runner. It's sure a pleasure to ride with someone who knows his power."

The engineer flushed as he scanned the menu. "Thanks, Mr. Dooley; guess I've always admired a good engine and tried to understand her."

"There's only one man on this road," continued the foreman after the waiter had gone, "that could handle engines as you do and made them part of his very life."

Holy Christopher! thought Charlie, slapping his napkin roughly on to his lap. Another disciple of Jackson Bates, heaven's own engineer! He felt like throwing the silver napkin ring through the window at some harmless passer-by, or jumping up and cursing.

"A man who made railroading his life, but was the world's biggest louse away from the road," said Mr. Dooley. "Sometimes I think that engine service brings out the best and the worst in a man's character."

Charlie's breath whistled from his lungs, and he was afraid to take another.

"Who was that engineer?" he asked quietly.

"Why, Bates, of course. The man who had the job before you." The brass hat answered his query as he salted a piece of celery, unaware of the turmoil he was causing.

Charlie took his time, hoping to conceal his sense of relief and elation. He wondered if he was glad to find out that Bates had not been perfect, or was it merely that he felt justified in believing that any man reputed to have been a paragon must have been faking.

"Tell me about him."

"Well," said Dooley, "Bates was a bum actor, God rest his soul. He was mixed up in several scrapes at Reno —gambling, women, and all the rest. I'll say one thing for him, though, he never drank while on duty and I think that was because he was first a railroadman. He was a damn good engineer, but knowing what I did, I could never have complete confidence in him."

Charlie stared at his favorite turtle soup, watching the savory steam pass his nostrils without registering. "Did you know him long?"

"'Bout fifteen years," said the road foreman, not suspecting how much the subject interested his companion. "Knew him before he came up from the Southern Division, in fact I was out to see his widow at Fresno last week. I took her out a two-hundred-dollar check from the office, as a sort of unofficial memoriam. She's saddled with a load of debts and a daughter, Dorothy, still in school. All Bates left of his insurance after peddling and mortgaging it was enough to bury him."

Charlie stared out the low-set window at the warm square below, as the first of the evening lights came on, cutting the gloom of the dusk for couples who strolled through the tiny park. He suddenly felt very friendly toward the world at large, wanting to do some kindness for it. Then roughly his conscience got after him. He sighed and puddled his soup which had become distastefully cold. He took it absently, without any comment.

NOT LONG after the run with the road foreman, Charlie Patterson laid off and went to Fresno. Rambling along the sunlit streets, he found the house which the city directory indicated as "Bates, Jackson N., loc engr S F." He strolled up the stone walk. His huge frame bulged the shoulders of his gray tropical worsted, and his fifteen dollar panama suggested a member of the local Chamber of Commerce.

Charlie rang the bell and waited, nervously shifting his weight from one foot to the other. A calm woman opened the door.

"Mrs. Bates?" The visitor lifted his hat and wished he had remembered to discard his cigar.

"Yes," replied the woman directly. She had the bearing of one who had had much sorrow but learned to meet it well.

Charlie gilded the truth. "I'm a member of the Brotherhood. I came out to see about Mr. Bates—" and he trailed off, unsure of his story.

"Come in, won't you?" invited the widow, stepping back from the doorway. "I thought all my husband's affairs were settled."

She nervously fingered her white seersucker apron as she led the way into her home.

The house was shabby but neat. New furniture, paint and a hammer could have done wonders for it, but it was evident that she had to get along with only the furnishings she had owned when she was first mar-

Morse Memories

THE MAIL roars by 'neath a starlit sky
As the dark, wee hour appears.
The desert broods in a thousand moods
As she has for a million years.
The wall clock's crack in my lonely shack
Is time to a nocturne's flow,
And the sounder's spree is the song to me,
From files of the long ago.

I do not fret for a daylight set,
Nor pine for a relay wage. . . .
I'm all okay on the right-of-way,
At night with the sand and sage.
I sit out here on the old frontier
And chat with a boom-town ghost
Of virgin trails and the light steel rails
They laid to the far West Coast.

—Charles D. Dulin

ried. Charlie looked around for an easy chair, but finally surrendered to the horsehair sofa, which struggled to conceal itself under a carefully fastened slipcover. He settled down stiffly.

"Mrs. Bates." He cleared his throat and started again. "I—we—the boys wondered how you were getting along since—" Charlie stumbled to a halt.

The woman helped him along. "I thought you were going to say that Jackson left some insurance with the lodge," she said sadly. "It seems there's nothing, and I don't know how we can keep going until next year. If I could manage until Dorothy got out of school, everything would work out."

Mrs. Bates appeared to be relieved to have someone to listen to her.

"Now that's just what we wanted to know," Charlie replied. "We don't leave a widow of one of our men to charity. I'll see that you receive enough money to tide you through. It's quite the rule, you know," he finished lamely.

Her smile was worth the trip to Fresno. The widow seemed to be overcome by this quick solution of her problems.

"Why, that's wonderful!" she exclaimed. "I've been so upset I could hardly sleep trying to figure out what we would do. Mr. Dooley, that nice man from the office, brought me two hundred dollars, but that hardly paid some of the debts that won't wait."

Charlie piled on the cheer. "Now don't you worry at all. Very soon you'll be receiving pension checks, you know, and with the money you get from the lodge I'm sure things will be fine."

"I'm so glad to hear you say that. My daughter has another year of school and I hate to have her drop it to go to work. I think every girl needs all the education she can get today."

The engineer nodded absently, his eye fixed on a small wooden model of an 0-6-0 yard goat that stood on the scarred sideboard. It was a fair piece of work, not too carefully finished, but the type of thing constructed by someone who felt it a duty. The little engine told Charlie far more about Jackson Bates than he had learned from Jigger Jensen or the man's admirers. For a moment he saw behind the legend to the man himself. It told him more than Mr. Dooley's de-

A Railroad Photograph

YES, there's the old crew that I left,
The rails who waved good-by,
The true-blue pals who shook my hand,
With cinders in each eye.

Their faces grin as once they grinned
When we rolled tonnage there,
And there's the gal who pulled the mails
To good old Railroad Square.

Her eye is bright, her wheels are true,
With steam up, there she stands,
And I who look with musing eye
March on in foreign lands.

I hope to join my old crew soon,
Those rails who waved good-by,
The footboard pals who shook my hand,
With cinders in each eye.

—Earle Franklin Baker

nunciation or his evident lack of providing for his family.

"Jack's work?" he asked.

"Yes," said Mrs. Bates. "It's quite a dust catcher, but it seemed a shame to put it away so soon."

The visitor looked at the ceiling. "That's a fine piece of work. Well done! I'd give you two hundred for her, if you don't feel it's bad taste to sell."

The model was worth about fifty dollars to a person who didn't care much about fine workmanship.

The widow gasped. "Bad tasfe? Why, it's wonderful, and I know it's exactly what Jackson would have me do."

The engineer reached for his wallet, and inwardly grimaced. With his new insight into the character of Bates, it was just what he would have done.

JIGGER Jensen watched his new runner carefully for the next few weeks. Charlie had lost all the tension that had bothered the fireman when he first came into the Diesel cab of *The Ram*.

He tooled the big motor over the division, drifting her, easing her, sometimes forcing her along. They kept their schedule first by minutes, then by seconds. It seemed to amuse Charlie to feather his train to a stop in a yard and check the running time against the second hand of his 21-jewel watch.

"Forty-five seconds late," he'd say, or, with a smile of satisfaction: "Ten seconds ahead of time."

There was a master's touch in his work. No longer did Charlie feel the weight of Bates's memory; and, whether or not he sensed his fireman's new approval, he did not become friendly or confiding. Then one bright day late in October, Jigger asked to meet him at the Barker House after the run.

"See you in the bar about four."

Charlie was no fanatic about Rule G. He was cool from his shower and shave, and waiting at the bar, when Jigger breezed in. They ordered whisky sours and Jigger toyed with his drink for a few moments before he blurted out what was uppermost in his mind.

"I had a talk with Dooley the other day, and went down to Fresno to look up Mrs. Bates."

Charlie nodded silently, dug two cigars from his pocket and laid one in front of his companion after he had snipped off its end. He held up a lighted match. Around a cloud of gray smoke, his cheeks puffing, Jigger reproached him.

"You never told me that you had seen her."

"I didn't think it made much difference," Charlie said casually. "Just went down to see how she was getting along."

This evasion did not fool the fireman. He'd already heard about the engine replica, so he replied:

"Yes, and give her two hundred for an old model that Jackson threw together some years ago and never really finished."

The engineer shrugged and hid his embarrassment by appearing intent on the small wet circles he made on the bar with his frosted glass. Jigger continued speaking, as though to himself.

"You never told me the truth about Bates. I had to find out by accident from Dooley. Had to learn a guy can be too perfect."

The sun sent its rays in neat patterns through the open doors of the grill room. Charlie took a deep breath and grinned. From now on, he was living his own life.

Varnish on the Signal

By JOHN PAUL MILLS
Telegrapher, Kansas City Southern

IF PASSENGERS on the Midwestern Central's Number 306 noticed Bill Jasper at all, they saw only a small, pleasant-faced man who rode uneasily in his seat. He stared out at the broken landscape through the thickening dusk, listening to the familiar click of the wheels, and their tempo seemed to grow faster as they brought him nearer to the life he thought had ended some years ago.

Back in the 30s, when Bill quit the MC and dispatching under his doctor's orders to move west, he figured his railroading days were over. He sent the operators on the third trick a "73," signed the transfer for the last time, and put up his final OS. Then grimly, Bill sold his belongings and headed for an outdoor life of so-called ease in the hot, dry sands of Arizona.

Before he was allowed to work again, ten years had passed. In that time, Bill had given up any idea of returning to a job on the double-iron. His fifty-five years were too many to impress the brass hats in spite of his service record.

As soon as the ex-dispatcher was able, he bought a chicken ranch in Oklahoma where he tried to persuade himself that the crowing of roosters was a Mallet whistling on a hill. But he never lost his hunger to breathe cinders and smoke again. The clatter of freight along the nearby Rock Island tracks recalled his own early years in lonely posts—the nights broken by the deafening charge of trains that momentarily drowned out the clear-toned speech of the resonator. And the more he longed for it, the harder he worked his farm to forget.

But now Bill was on his way back, riding the Central's local passenger to Republic on a pass. Years of waiting for this moment keyed up his excitement and expectation. It came so quickly it had taken him unprepared —that advertisement for skilled railroad men, with no mention of an age limit, was all he had needed to drop everything. Without a backward

"HEY! What've you got on the board?" he shouted

glance at the farm or thought of the wasted labor, Bill left for Webster Grove like a crack train given a high-ball. His foreman could handle the ranch until he had time to arrange the sale, and Bill regarded whatever happened to it of little importance.

Twice this morning Bill had fallen asleep in the division offices while filling out the book of rules. The same drowsiness encompassed him in the train, and neither the low moaning of the engine whistle nor the monotonous clack of the cars hitting the rail joints disturbed his rest.

"Dis am yo' station. suh."

Bill jerked erect to find the porter tugging his arm and yelling for Republic. Half asleep, he stumbled down the platform toward the glow of the station lights. It seemed a good distance away and walking along he tried to thump the numbness out of his feet. As he neared the depot, he saw someone standing in the waiting-room doorway.

"Hello there," called the second trick operator. He came forward and stuck out his hand. "Guess you're Jasper, the new third trick man."

"That's me," said Bill while he gripped the newcomer's big paw.

"Dillard's the name, Tom Dillard. Come on in."

Turning aside, he led the way indoors.

BILL'S EYES grew misty as he looked about at the agent's littered desk, the pot-bellied stove, zinc water-bucket, the oil lamps that flickered and smoked, and the three telegraph sounders. Not too much had been changed since his time. Outside, the red and green lenses shone through the windows like brilliant eyes.

Tom Dillard reported the passenger to the dispatcher and returned to Bill. His thought must have been written plainly in his expression, for Tom sensed his mood.

"Like old times, isn't it?" he said. "Certainly never thought I'd OS another train."

"You new here, too?" asked Bill.

"Sure. I'm just filling in to keep things rolling for this war rush."

Immediately Bill felt at ease. It was as though the ten years he had been gone were swept away.

"That's right," he agreed. "Is there a place nearby where I can get room and board?"

"You bet," said Tom. "Two blocks north, if there were blocks out here. It's the two-story house at the four corners. I'm staying there so I know you'll be able to get a room in the morning."

Bill looked around for a peg to hang his coat on, while Tom watched him curiously.

"Boss told the agent you'd been off for a long time and might need some pointers. I'll show you what's new before I leave," he said.

"I don't suppose I'm much of a lightning slinger any more," the old-timer replied.

"I'll bet you're not," laughed Tom. He ran a gnarled hand through his thinning hair. "I was just like a kid on my first night, bulled my first train order, but then—"

A freight whistled for the station interrupting their talk. As two trains went by, Bill learned the directions; and since Tom had orders for one of them, he showed the newcomer how the train order signal worked. The mechanism was a bit different from the old ones.

"This ain't much of a job," said Tom glancing at the clock and struggling into his coat. "They don't run

many trains, but they keep the place open because of the blind siding at Renfro, just south of us. There's a student at Climax first office south, and he ain't so hot."

Tom searched the office to see if he had forgotten anything. "You know the call, and where we keep the time card. Is there anything else you need?"

"Reckon not," muttered Bill. "I'll handle it."

"Well, I'm off to hit the hay. Good luck!"

A short time after Tom left, the operator heard the dispatcher give Number 51 and Number 62 a meet at Renfro. Finding it hard to stay awake, he went out on the platform and strode up and down. The night was terribly still. Then to the north Number 51's headlight suddenly cut a path across the sky as it pulled up a grade. Bill ambled back inside where he could hear the dispatcher's call.

He'd scarcely seated himself when the heavy feeling overpowered him. Exasperated, he went to the wash basin and threw cold water on his face. This was little help, and in despair he dropped the train order signal to stop position, figuring that if he should doze, the engine whistle would rouse him.

NEXT thing Bill knew, the engineer on Number 51 was mauling his shoulder.

"Hey! What've you got on the board?" he shouted.

The operator made a desperate effort to stall while he came to. Through his window he saw the puffing locomotive, and it was easy to imagine what had occurred.

"The board's got varnish on it," he said still half asleep. "That dispatcher said put the signal against you."

It was just a long shot. But as he reached for the key on the train wire, he heard his station call on all three wires.

"BK," he replied, breaking in on the DS's urgent tapping. "Got anything for Number 51?"

The sounder rattled so fast it smoked. For a moment it made no sense.

"Have you got him? Is he coming?" demanded the other.

"Yes," Bill replied sending deliberately, "he's here, stopped."

The DS held the wire open for a minute. "Tell him to back up and get in the clear quick. That damned student at Climax failed to give 62 the meet order, so he won't look for 51 at Renfro."

The operator turned back to the angry runner and explained what happened. The hogger swore.

"That's why I saw that glare!" Heading for the door he hollered at the brakeman. "Get the hell down the line and flag Number 62."

The *rat tat tat* brought Bill's attention back into the room. "Did you get him, RU?"

"Sure," the op answered, watching sparks tossed upward as the engine on Number 51 reversed down the track. The engineer fed her steam.

"Can you see Number 62?"

"Her headlight's on the bend, but Number 51 is just about in the clear."

As the train from Renfro poked her nose around the curve, the head brakeman on the opposing train snapped a fusee. Her whistle gave a responding blast, and her wheels screeched on the steel rails while she slowed down. When she pulled through the station, her pace was a crawl.

"Everything's fine. Number 51 is in the clear and 62's gone by," Bill reported to the nervous dispatcher.

There was a clipped acknowledgment, then the wire remained open. "Where the hell were you when everyone on the road was trying to raise you?"

Bill was wide awake now. "I heard the man at Climax say he didn't give Number 62 that meet order so I dropped the board. The light went out and I had to go down to fix it. I didn't tell you because Number 51 was right here."

"I . . . I," the DS snapped the key shut.

The operator looked up to find the runner on Number 51 standing behind him.

"Tell that hammer-head to give me something on Number 62." The fellow tried to appear gruff, but he couldn't erase the scared look on his features.

"Sorry. I should have thought of that myself. Guess he forgot it—he may be getting old like me."

It was stupid the way he had forgotten so much that was once mere routine.

"Naw, he ain't," the driver retorted, color returning to his face. "He's one of these damn 1945 dispatchers. You old-timers at least got enough sense to put your board out."

The op cleared Number 51 and OS'd him after he had pulled out. Bill wondered what story the DS would turn in. He didn't care particularly, but he hated to think he had gone to sleep on the job like a kid.

WHEN Sam Jones, the agent, relieved him the following morning at eight, Bill didn't mention what had happened. After the usual introductions and chatter, he headed for Tom Dillard's boarding house and went to bed. Late that afternoon he awoke. It was still too early for supper, so he dressed and strolled casually down to the depot. Jones looked up and grinned good-naturedly as he entered.

"Got a note for you from the chief at Webster Grove," he said, handing Bill a folded paper. "Ain't a message. Rudd gave me the note himself."

The operator took the piece of clip and flattened it out with mingled feelings. Without a doubt, it concerned his falling asleep. Somehow Bill hadn't thought that the engineer on Number 51 would say anything about it.

"Thanks old timer," it read. "I wish I knew where I could get some more like you." This was all the chief dispatcher said. Bill Jasper stared forlornly at the words.

"Figures your pretty good for a 'has been' from the looks of that," said the agent.

" 'Has been' is right," Bill muttered brokenly. "I had an idea I was tops until. . . . Guess I'll eat," he added, raising his voice somewhat as he walked swiftly out of the office.

Build an

N & W

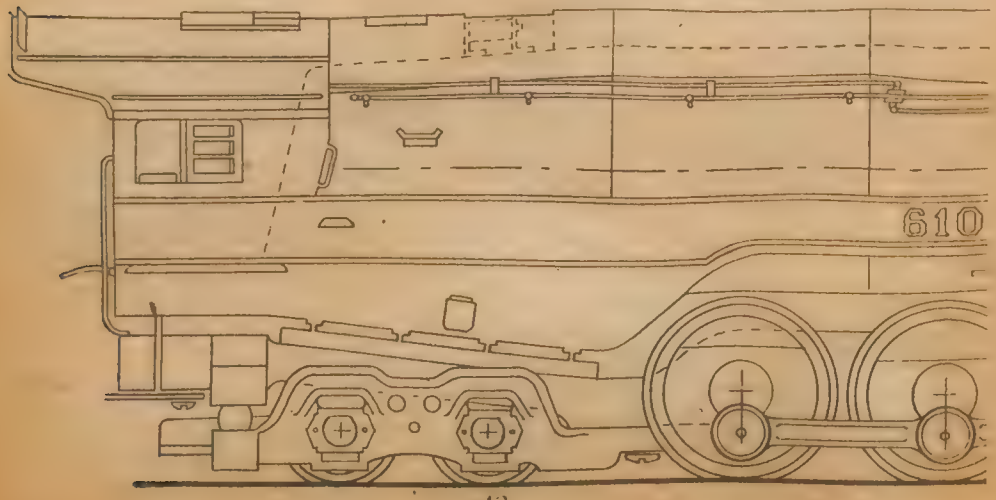
Streamlined

4-8-4

By THE NUT-SPLITTER

WHEN Norfolk & Western wanted the world's most powerful streamlined passenger engines they set model railroaders a worthy example by welding their own. Just how good a job they did you'll never know until travel restrictions let up a bit and you can head for the honeysuckle mantled route of the *Cavalier* and *Pocahontas*. Then, if you don't drop us a postcard from Norfolk, Roanoke, Bluefield, Williamson, Portsmouth, Columbus or Cincinnati, asking what issue plans of this J Class appeared in, the chances are that you will already have built a model of the bullet-nosed beauty on the strength of the photograph above.

Picture the same scene, gentle reader, in heart-warming and three-dimensional kodachrome. Those mountains are greener than the paper-mache tunnel your Aunt Bertha gave you on your fifth birthday, and the ballast beneath them is six shades lighter than aquarium gravel. In between is a ribbon of Tuscan red coaches; a richer, wineyer hue than the Pennsylvania's. This bright flash of color continues, ribbon-like, along the

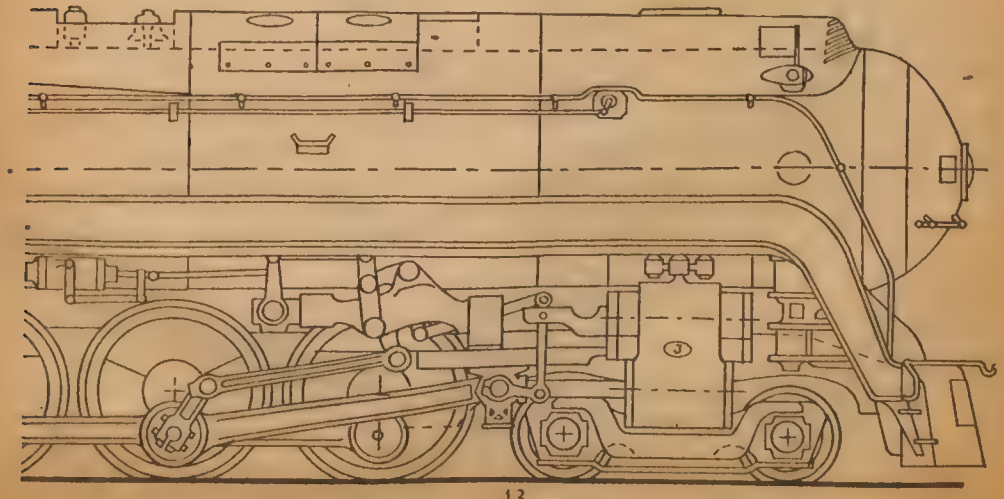


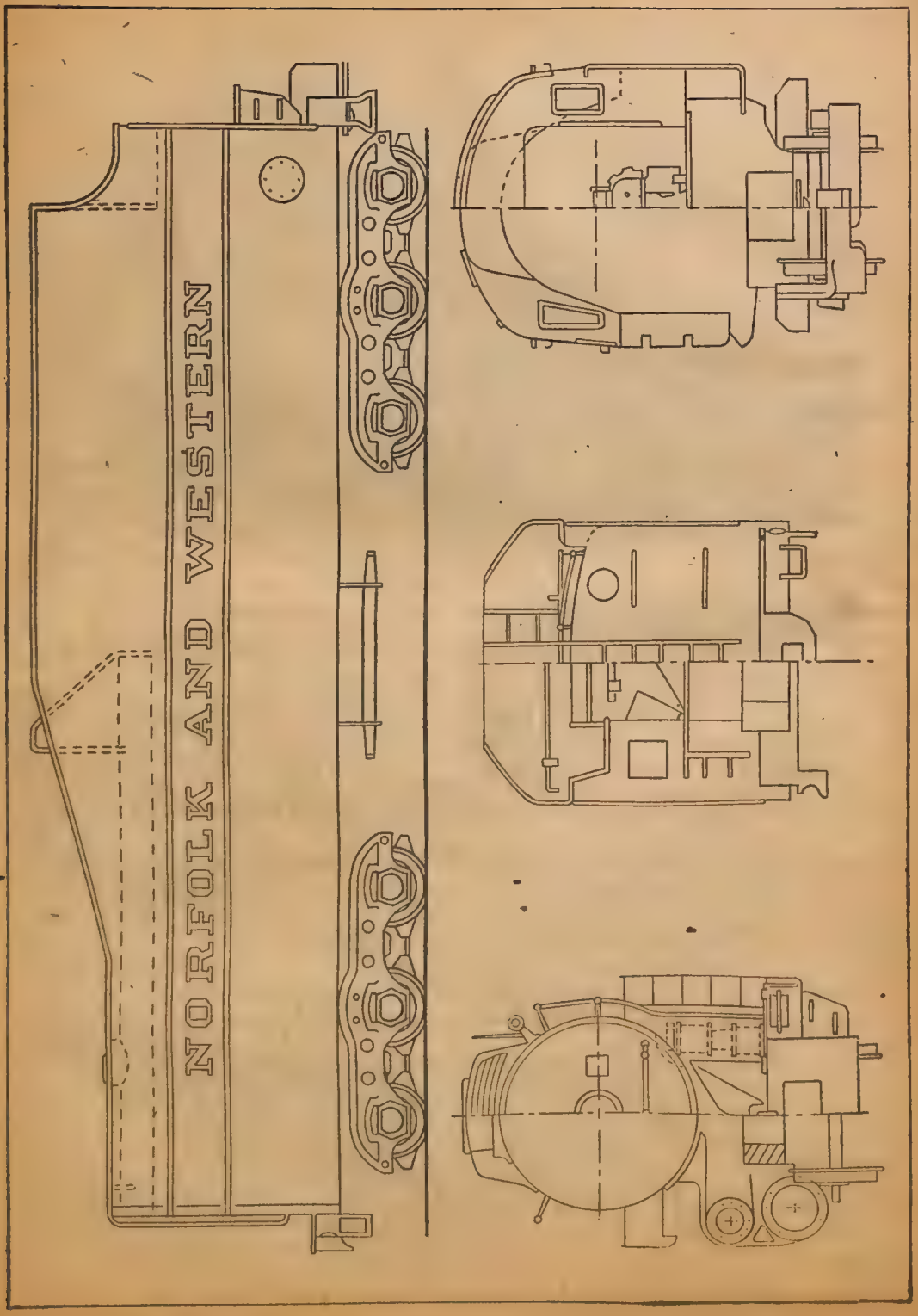
flank of the tender, forming a lettering panel, and then skirting the running board of our black beauty and curving gracefully down to the pilot.

For those of our readers with a rusty knowledge of the 600s, let it be said that the newest engine of the series, scaled to Double-O gage on this spread and the following page, has outside-bearings on its leading truck, and certain cylinder modifications. It might be added that all the J-1 engines (featured in the Locomotive of the Month, July, 1944) have now been similarly streamlined and reclassed in the J series.

Coming next month:

00-Gage Hospital Car




NORFOLK AND WESTERN

Light of the Lantern

OLD CHENANGO BRANCH

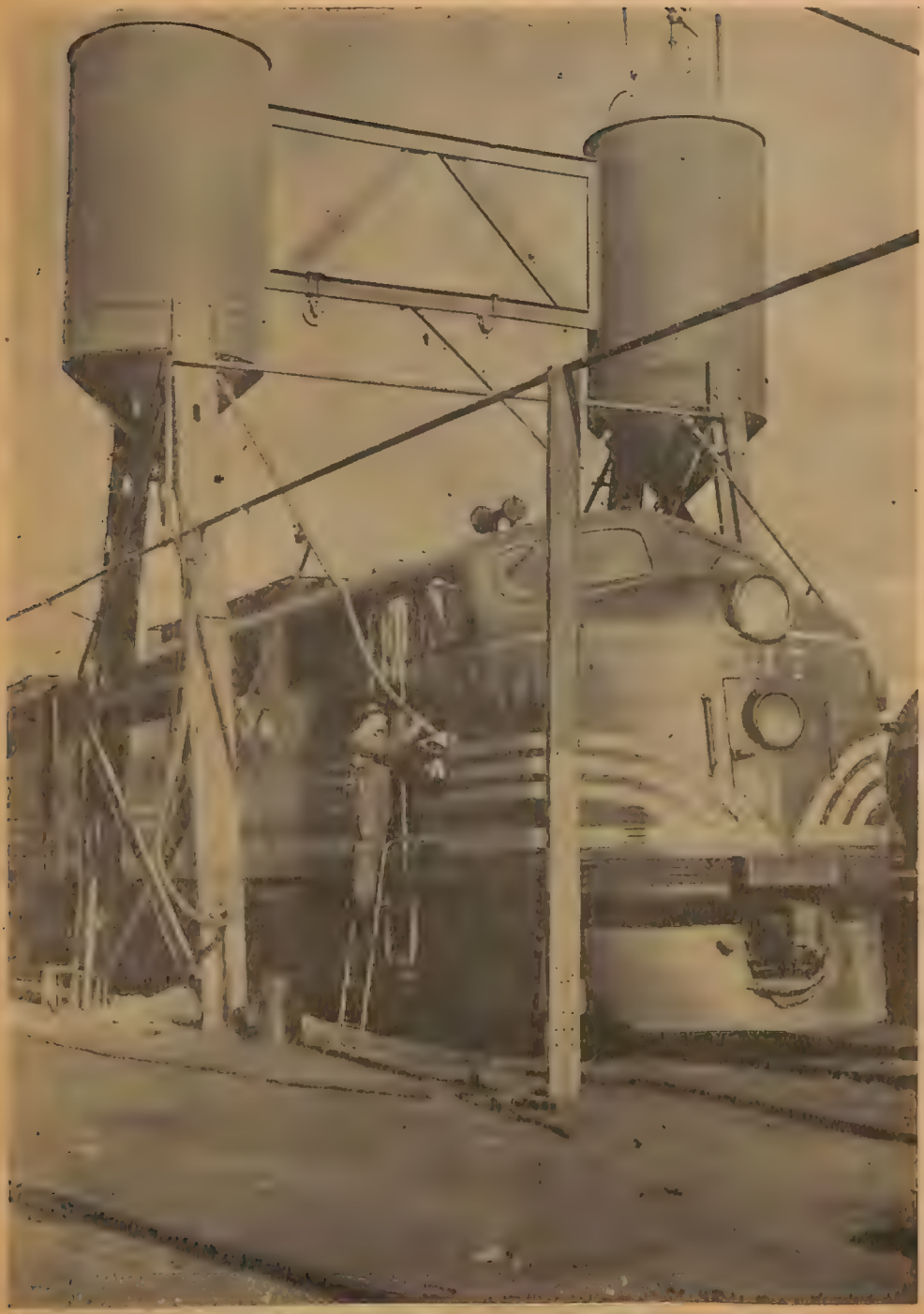
This West Shore feeder, running forty-five miles from Earlville, New York, to Syracuse, was originally the Syracuse & Chenango Valley, built in 1873. Eight years ago, New York Central tore up rails and ties between southeastern terminal and Cazenovia (Right). Passenger train and crew (Above) was photographed in 1905

1

WHAT *is the significance of Gulf, Mobile & Ohio plans to acquire the Alton?*

Isaac B. Tigrett, veteran GM&O president, and Stephen B. Gibbons, chairman of the protective committee for 3 percent bonds of Chicago & Alton, predecessor of the Alton, recently announced that the GM&O had agreed to buy the Alton, the transaction subject to approval of the courts, the ICC, and Rebel Route stockholders. In 1930 the old Chicago & Alton, in receivership since 1922, was sold at public auction to the Baltimore & Ohio for $23,000,000; and in 1931 the Alton Railroad was organized and took over the property, all its stock being held by B&O. In 1942 the B&O wrote off the stock as worthless, and the Alton again went into reorganization.

Acquisition of the 958-mile Alton would mark the second extension in recent years of the old Gulf, Mobile & Northern lines,



SAND FOR A SAMSON. Rio Grande is running its 5400-horsepower Diesel-electrics twenty hours out of every twenty-four. Streamlined terminal facilities cut turnaround time. The road handled half a million carloads of freight last year

IN ADDITION TO Rio Grande's 500,000 revenue loads, there was the little matter of one deadheading caboose, trundled from Colorado Springs to Denver shops, after foray with a Santa Fe switcher

which in 1938 merged with the Mobile & Ohio, then in receivership, to form the present GM&O, thus achieving a valuable entrance to the St. Louis gateway. In the newest proposal the growing system would be extended to Kansas City and Chicago, creating a network of about 2931 miles and furnishing a competitive route to the Illinois Central between the Windy City and New Orleans.

2

EXPLAIN *the origin of the odd device in the Northern Pacific herald.*

The monad, to which you refer, symbolized in ancient Chinese philosophy "the great creative principle of the universe." It was adopted by the NP after E. H. McHenry, the company's engineer, had seen this device on the Korean national flag at the 1893 Chicago World's Fair and had been impressed by its simplicity. The NP's use of an Oriental motif is justified by the fact that this road, in peace time, hauls much silk and other products from the Orient.

3

IS THERE *any truth in Japanese claims that their streamlined train, the Asia Express, was the world's fastest?*

No. Before the war the Japanese ran a streamliner between the port of Dairen and Hsinking, capital of Manchuria. The *Asia Express,* as it was known, was probably Asia's fastest train but was far from being the world's fastest. The time allowed for the 434.8 miles, including intermediate stops, was 8½ hours, giving an overall average speed of 51.1 miles per hour. The locomotives used were streamlined Pacifics, largely based on American practice, of which the outstanding feature was the large firebox, with a grate area of 67 square feet, designed to burn soft Fushun coal. Inasmuch as Nipponese locomotive design, like most mechanical and scientific developments in Japan, was based largely on the work of other countries.

ROYAL 4-6-4 marks the northern shore of Lake Superior with a tracer of white steam. She's Canadian Pacific 2838

we know of no special claims to efficiency that these engines possessed. One reason for this train's speed as compared with that of express trains in Japan proper, was the Manchurian standard gage. The gage on the Japanese islands is 3 feet 6 inches.

4

WHAT *rail route does the circus follow in coming into New York City for its annual stand at Madison Square Garden?*

Trains of the Ringling Brothers and Barnum & Bailey Combined Shows enter the New York area over the Pennsylvania's freight line into Greenville yard, at the southern end of Jersey City and on the shores of New York Bay. From Greenville they are ferried across the bay on car floats by PRR harbor transfer tugs to the busy Bay Ridge freight yard of Long Island Rail Road. From there the circus is carried across Brooklyn and Queens boroughs over the belt line used jointly by the LIRR and the New Haven. It passes onto the New York Connecting Railroad tracks, which span the East River by Hell Gate Bridge, continues into the Bronx over the New Haven's route into Mott Haven Yards and its connection there with the New York Central.

Since no freight yard in Manhattan can handle the unloading of the two-mile circus caravan, which tied up yard tracks for forty-seven days during its long stand at the Garden last April, the New Haven plays host to the circus cars at Mott Haven during their stay in New York. The NYNH&H yard, adjacent to the larger one of the New York Central, has the advantage of being on the best direct route to Boston, the city for which the big show next heads.

As the circus trains do not enter Manhattan, the animals and many circus stars and personnel are unloaded onto trucks at Mott Haven, and move from the yards north in Lincoln Ave., west in 134th St., and south across the 3rd Ave. bridge into Manhattan. There most of the line proceed east in 128th St., south in 2nd Ave., west in 57th St. to 8th Ave. and south to 51st St. and the Garden.

EASTBOUND *Wolverine's* J-3a Class Hudson left New York Central rails at Rochester overpass recently, carrying her engineer to his death

SLIPPERY AS AN EEL

RESPLENDENT in stainless steel knee-pants, this Spanish streamliner slithers around sharp curves at speeds twice those considered safe for ordinary rolling stock. Independent wheel suspension, light weight, and a low center of gravity are major factors making for stability, says Lieutenant-Colonel Alejandro Giocoechea, inventor of the motor train. Its cars are abnormally short (12 to 14 feet) and employ stressed skin structure similar to that used in airplane construction. Weight, per passenger carried, is less than 200 pounds, as against more than a ton for a normal train

5

I AM *curious about dining-car service formerly maintained by the Virginian. Was a cover charge made for meals? When was the service discontinued? What became of the cars?*

The Virginian Ry. did have a minimum charge on the use of club cars for dining. It was the only cover charge. Club-car service on the Norfolk Division between Norfolk and Roanoke ceased some time prior to Nov. 30, 1932, when service was discontinued between Roanoke, Va., and Charleston, W. Va. At one time the Virginian had five club cars. Four have been scrapped. The fifth is now in service as a business car, having been converted.

6

GIVE *specifications of new six-wheel switcher which Lima recently delivered to Union Railroad.*

Type, 0-6-0; locomotive number, 187; cylinders, 22x28; pressure, 220; weight, engine, 201,400; tractive force, with booster, 64,190.

7

NEW YORK *subway system is often spoken of as "the world's busiest railroad." Supply figures showing extent of operations and number of passengers carried.*

Subway lines of New York City Transit System, as operated by the Board of Trans-

NEARING the Montana-Idaho state line, Great Northern's ***Empire Builder*** skirts southern bank of the Kootenai River. Silver-nosed engine is P-2 Mountain type 2510

portation, City of New York, are divided into three operating divisions: the Independent, municipally-owned from the start; the Interborough Rapid Transit and the Brooklyn-Manhattan Transit, both of which were privately owned until the recent unification of the city's rapid transit system. Together, the three divisions operate 748 track miles of so-called subway lines, or about 275 route miles, nearly half of which is actually elevated or operated through an open cut only slightly below street level. Last year the entire subway system, which, incidentally uses 4166 new electric light bulbs a day, operated a total of 12,411 train trips every 24 hours. A record high of 369,638,593 car miles were run off—the equal of 14,600 trips around the world at the Equator, or 564 round trips to the moon.

Another record was the all-time high of 2,442,058,845 passengers carried in 1944. On an average week day the subways transport 7,190,172 persons, and 44 percent of this heavy load is jammed into the four rush hours—from 7 to 9 a.m., and from 5 to 7 p.m.

Continuing with the statistics (you asked for 'em!) we find that 4,587½ cars carried these passengers to and from the 534 stations on the system. The half-car is explained simply: some of the BMT cars are multiple affairs, counted by the Transit Commission as the equivalent of 2½ standard units.

The average car is 59.6 feet long, 9½ feet wide. It has 59.3 seats, 38 hand straps, is deemed reasonably full when 160 persons are inside and full when 260.6 are in. The official maximum is 298 in the largest BMT cars, and no New Yorker emerging from a ten-car rush-hour express doubts that at least 2979 others have been traveling with him, not including the train crew of three. The Transit Commission figures that in a packed IRT train each passenger has 1.29 square feet of space; and 1.4 on a BMT train.

Both employes and equipment work overtime carrying the extra war load.

There is now a force of about 31,600 transit workers performing the work of 34,000. Unable to pay the wages of private industry in wartime, the city is losing employes faster than it can hire them. Thus the turnover is great.

Maintenance of equipment is an equally big problem. In addition to lacking the labor needed to clean and repair cars, stations and right-of-way, the amount of equipment is inadequate. For example, the Independent division has 1,700 cars, 1,628 of which are required for each day's service. This means that only 72 can be laid up at any time for inspection or repair. The entire system has not been able to buy a single new car since the summer of 1939, when an order of 150 was received. In the interval of almost six years, it would normally have bought about 500 new cars, retiring some of the oldest equipment.

8

RECENTLY *you explained distinguishing features of the California-type streetcar. What about the Ohio type?*

The Ohio type was essentially a single-end car, of which the left side had a fixed or semi-convertible sash and an enclosed platform; the other side had a removable sash. Seating plan in winter called for a longitudinal seat on the left and cross seats along the right. In summer the segments of the long seat were turned at right angles to form a series of continuous benches, as in standard open cars. Like the California type—a compromise design intended for year-round service, to do away with the costly storage of idle open cars during winter months—the Ohio type was rapidly replaced by single-ended, pay-leave, and standard, double-ended closed cars for year-round use. Few, if any of them remain in service today.

9

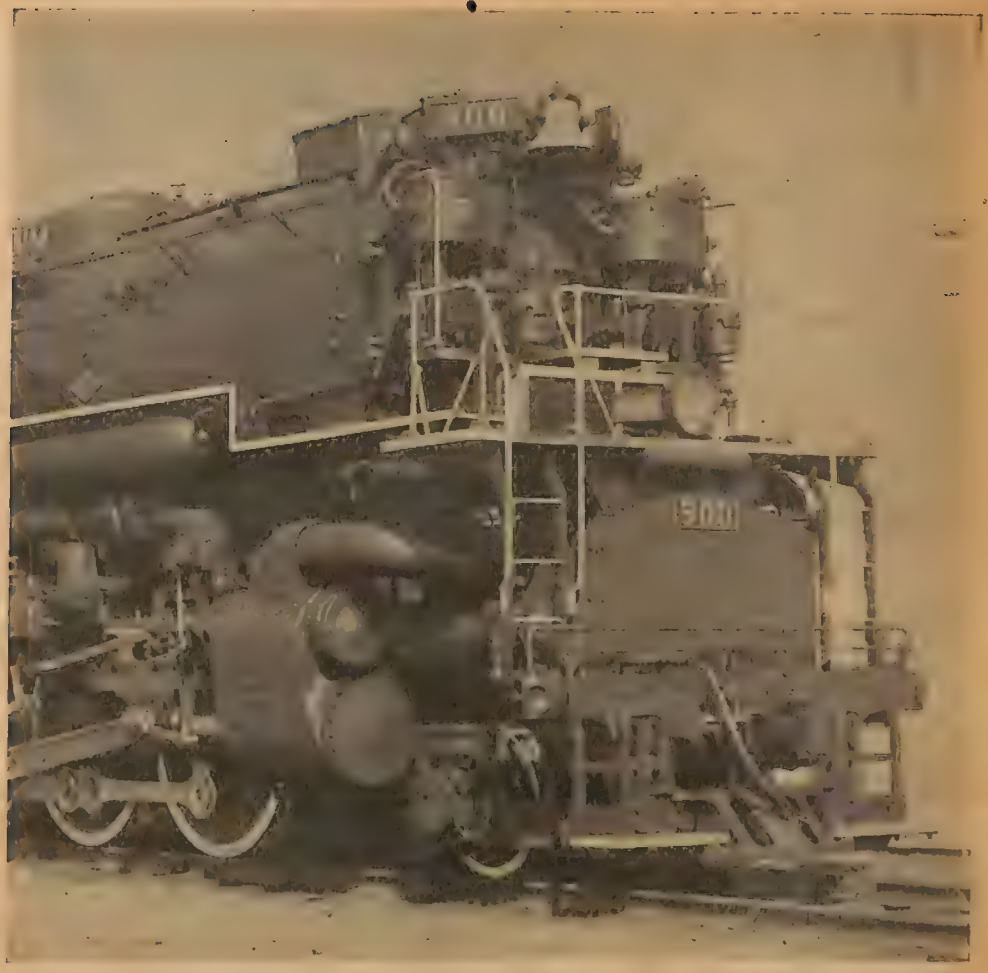
WHEN *was the Canadian National's line between St. Canut and Cushing Jct., Que., abandoned?*

Five years ago. Under the provisions of the Canadian National-Canadian Pacific Act, designed to promote closer cooperation between two systems, an agreement was reached June 15, 1940, for immediate abandonment of 24.6 miles of CNR line between the two points. This trackage closely paralleled the CPR route between those points and the competitive services were wasteful. Under the agreement, which made CPR the exclusive operator in the area, the net economy secured by abandonment, estimated at $24,000 per annum, is being shared equally by the two railways.

Locomotive of the Month:

OFT-HEARD COMPLAINT that standardization of Diesel-electric freight and passenger engines has detracted from the individuality of motive power, may be applied with equal emphasis to steam locomotives built under WPB rulings. Union Pacific *Challengers* now bear the herald of the Rio Grande. Southern Pacific *Daylight* engines blast up Western Pacific's Feather River Canyon. Duluth, Missabe & Iron Range borrows blueprints of the Northern Pacific's *Yellowstone* type. The Clinchfield cottons to Delaware & Hudson simple articulateds. And the PRR today operates almost four times as many Chesapeake & Ohio 2-10-4s as the originating road. In each case tribute is paid to sound design.

The latest crown of mountain Laurel goes again to Chessie's road, with purchase by the Koppers' Coke-controlled Virginian; of eight Allegheny engines for coal drag service between Roanoke, Va., and tidewater at Sewells Point, Norfolk. Identical in all major specifications to the C&O's H-8 Class simple articulateds, their



Virginian's *Allegheny*

sand domes and tenders alone show a flash of individuality. Uping the Virginian's motive power fleet to a total of one hundred and twenty-five units, of which twelve are electrics, these latest behemoths rank, along with the designing systems' 1600s, as the world's most powerful twelve-drivered machines.

It is doubtful that the 900s will long remain America's youngest foster engines. As we go to press word comes that Texas & Pacific and New York Central want 4-4-4-4s. Pennsylvania T-1s, perhaps?

Specifications

Numbers	900-907
Wheel Arrangement	2-6-6-6
Cylinders	22½x32(4)
Drivers	67
Pressure	260
Weight on Drivers	471,000
Weight, Engine	724,500
Capacity, Tender	
Coal	25
Water	26,500
Weight, Tender	469,400
Wheel Arrangement, Tender	6+8

The Would-Be Jesse James

King Pin of the Train Bandits—That Was Black Jack Ketchum's Vainglorious Ambition

IF THOMAS E. KETCHUM, known as "Black Jack" because of the color of his hair and mustache, deliberately set out to emulate the outlaw career of Jesse W. James, as many people believed, the attempt was a dismal failure.

Each of the two hard-riding and fast-shooting freebooters led a gang that included his own brother, but there the parallel ends. Jesse operated over a period of more than ten years; Black Jack pulled only one job and drew a blank on his second attempt. Jesse collected from banks and stage-coaches, as well as express cars on various roads; Black Jack confined his banditry to the Colorado & Southern. Jesse never saw the inside of a jail but was shot dead at home by two of his own henchmen; Black Jack grimly cashed in his chips with a sheriff's rope around his neck.

Historical events played into the hands of Jesse James. The Missouri lad reached his peak in the dark and bloody days of reconstruction that followed the Civil War, when the Midwest was still sparsely settled and travel and communication in that area were rather primitive.

It was not until fifteen years after Jesse's death that Tom Ketchum turned to the old and somewhat obsolete trade of train robbery. In the interim between 1882 and '97 civilization had made some big strides, notably in methods of catching criminals, so that newcomers preying on

the railroad did not last so long at the tricks their predecessors had used effectively.

Black Jack was a lean and hard-faced bozo with handle-bar mustache and high forehead. Fate must have loaded the dice he rolled on the cool starlit evening of September 3rd, 1897, for his very success was to prove his undoing. That night the gang consisted of Black Jack himself, his younger brother Sam, Will Carver (alias G. W. Franks), and "Shorty" McGinnis (alias Ezra Ley), and two or three others. Every one of them was at home in the saddle and a dead shot.

By RAYMOND E. MAHER

They followed the James brothers' technique of earlier days. Riding to a lonely spot in the wastelands of northern New Mexico between Twin Mountain and Folsom, they covered their faces with masks and went to work. First they stopped a southbound C&S mail and passenger train, on which Frank E. Harrington was conductor, by piling rocks on the track. Then, whipping out their pistols, they divested the passengers and crew of money and valuables. After that they rode away, unscathed, and hid out in a spur of the famous Cimarron Canyon until the pursuit had died down. It was really quite simple. The swag totaled about $3,500.

Fiction writers will tell you there's no such thing as a perfect crime, and they are probably right, but the hold-up just mentioned came very close to that category. The county sheriff, his

deputies, and even the lynxlike railroad detectives were completely baffled. It was as though the earth had opened up and swallowed the brigands without leaving a tangible clue. Tempting offers of reward failed to bring about a solution of the case.

From the Ketchums' viewpoint, the affair had been pulled off without a hitch. Not even Jesse James could have done better. As everybody knew, "poor Jesse" had long since "gone where the woodbine twineth," and his brother Frank was then treading the strait and narrow path on the payroll of a respectable Wild West show. That made Black Jack Tom Ketchum the king of train robbers—or did it?

TOM KETCHUM

Holed up in a mountain retreat about ninety miles from the scene of banditry, the gang divided their loot and gloated over their lucky break. They had made a pretty good haul and had thrown the law off their trail, which gave them plenty of reason to celebrate. As time drifted by, however, the chuckling turned to discord. Sam challenged his brother's claim to being the brains of the outfit, and two others sided with him against the older man.

"We could have handled that train without your help," they boasted.

Such talk must have been gall and wormwood to the soul of Thomas E. Ketchum. The wrangling dragged on nearly two years. Finally it came to a head July 9th, 1899, when the younger brother, Carver, and McGinnis decided to prove they could do a job on their own. Loading a pack horse, they left the rough timbered shack which they called home and rode toward Folsom, without telling Tom where they were going, to try another stickup on the Colorado & Southern. The southbound mail had paid off once and might easily do the same again.

So the gang split up, leaving Black Jack alone. As the rejected chief watched the little procession wind down the canyon trail and out of sight, he did some heavy thinking. He wasn't going to lose face if he could help it. He'd show them who was top man and he'd do it by robbing a train himself, single-handed.

That was a bold idea. Besides re-establishing his prestige, Black Jack reflected, such a move would yield a handsome stake he wouldn't share with anyone else. He knew that the C&S mail train usually carried a lot of kale for the tinhorns who ran gambling dens and dance halls at Clayton, N. M., and he made up his mind that some of those greenbacks and gold coins might just as well line his own pockets as be wasted on crooked roulette or tucked into fancy silk stockings.

A few days after Sam and his pals had vanished into the sagebrush, Tom mounted his coal-back charger and set out through the wilderness, also toward Folsom. The lone wolf said later that he had believed his comrades were aiming to rob a Santa Fe train in the vicinity of Las Vegas, N. M. His saddlebags prosperously stuffed with booty from the 1897 holdup, Black Jack jogged across the undulating foothills, dodging the few settlements that lay between Cimarron Canyon and Folsom.

IT WAS dusk of July 11th, 1899. A merciless sun had been pouring molten rays over the Southwest all day long but at last had gone to rest behind the mesas and a faintly cool breeze was stirring the tumbleweed.

An engine whistle pierced the twilight air. Engineer Tubbs used this method of telling the desert world that he was wheeling the southbound mail. His conductor was the same Frank Harrington who'd been robbed by the Ketchum gang nearly two years before, while Homer Scott had charge of the express car and its two safes.

As the train clicked over rail joints through the rugged lava beds of the extinct volcano Capulin, the skipper glanced at his watch, saw the hands pointing at 9:45, and decided they would be fifteen minutes late arriving at Folsom.

One of the passengers who swung aboard at Folsom was Sam Ketchum. Sam had caught sight of the signal fire near Twin Mountain which his two confederates, Carver and McGinnis, had set blazing there as a cue that they were ready. Upon reaching this fire, Sam was to climb over the coal-filled tender into the cab and force Tubbs to make an emergency stop.

The details had been planned carefully. Sam, wearing a mask, covered the engineer and fireman with two six-shooters, one in either hand, and the panting locomotive ground to a stop. Then he marched them both back to the express car, where they were joined by the masked Carver and McGinnis. Passengers, curious to learn the reason for the unscheduled stop near a mysterious campfire, began pouring from the coaches. The exodus, however, was instantly halted and reversed by a couple of warning bullets, which, luckily, hit no one.

Two desperadoes entered the express car. Homer Scott was not caught off guard. Surmising that the train was about to be looted, he had grabbed a few valuable packages from one of the safes and had pitched them among the ordinary express shipments in a far corner and thus, as it turned out, saved them from rapacious hands. That safe was still open when the outlaws burst in. They rummaged through it, dynamited the second strongbox, and picked out what they desired. Then they decamped.

"Guess we've got it all right," the express messenger heard one of the pair remark.

The intruders leaped out into the darkness, merged with a third shadowy figure, and strode over to their beacon fire.

Meanwhile, Conductor Harrington had not been idle. Motioning two deputy sheriffs who happened to be abroad his train, he led the way through the coaches to the rear platform. A short distance away, dancing flames plainly revealed four horses tethered along the outer fringe of the fire-glow. No human beings were near them, as two robbers were still in the express car up ahead and the third was standing outside, on the opposite side of the train, guarding the engine crew.

Said Harrington: "Let's see if we can't get those horses—that would leave the gang afoot!"

Even as he spoke, he and the deputies heard the explosion in the express car that indicated a safe was being blown open. The three men edged cautiously toward the horses. Before they could reach them, however, their engine whistle gave five

long blasts to serve notice that Mr. Tubbs was back at the throttle and impatient to get going.

Not wanting to be left behind on the wasteland with a bandit gang, the three men scrambled back to their train, and soon they were under way again. The plan to seize those horses before the outlaws arrived was thus blocked.

Harrington said later: "As our train was leaving the spot, I stood on the rear platform and watched the robbers congregate around the fire. I had a pretty good view of them. They appeared to be in no big hurry. I saw them throw something across a pack horse and then adjust their saddles before mounting and riding off. But I didn't get a look at their faces. I don't know whether or not they are the same men who held up my train nearly two years ago."

THE DESPERADOES galloped away toward the rugged reaches of the upper Cimarron Canyon, no doubt slowing down to an easy canter as soon as the train was well out of sight. As they rode along in the darkness they may have been speculating on the size of their haul and wondering what Tom would think about it when he learned the news.

Sheriffs' posses lost no time in scouring the countryside around Twin Mountain as wires busily ticked out reports of the hold-up far and wide. W. H. Reno, Chief of Special Service for the Colorado & Southern, rushed to Folsom by special train with four sharpshooters and joined in the man-hunt. Heavy rain had drenched the semi-desert at the base of Twin Mountain, thus obliterating tracks of the bandits' horses. Nevertheless, on the site of the beacon fire someone picked up an envelope bearing the address: "G. W. Franks, Cimarron, N. M." Now the trail was shaping up "G. W. Franks," as they learned later, was the alias of Will Carver. The sleuths believed that this man would be heading back into Cimarron solitudes. A buggy filled with armed pursuers, including Chief Reno and Ed Farr, sheriff of Huerfano County, Colo., set out for the town of Cimarron, a ride of about ninety miles. There they met Marshal Foraker and several deputies.

Developments piled up thick and fast. On July 15th a small group of ranch hands led by W. H. Love, a cowboy, rode into Cimarron with the report that they had just seen three mounted strangers and a pack horse heading into the rough country north of town. That was the cue the officers had been waiting for. Sheriff Farr, Deputy Willis Elliott, Mr. Love, and a local posse that included a citizen with the rare name of Smith galloped out to pick up the trail. Late that afternoon they sighted the marauders. After a brief but exciting chase they drew near enough for Farr to yell:

"All right, boys, the game's up!"

Instead of surrendering, the outlaws answered with a hail of bullets; and the fight was on. Guns blazed with all the fury of a Western melodrama. Some combatants fought boldly in the open; others took cover behind trees and rocks.

The sheriff slid from his saddle with a hoarse cry and died in a slowly spreading pool of blood. Mr. Love also sank to the ground, fatally shot. Sam Ketchum fell, struggled wildly to his feet, remounted, and galloped off. Mr. Smith suffered a leg wound. Chief Reno's coat was punctured by a bullet, but he himself escaped injury.

Night came on, and under cloak of darkness the three brigands fled. Sam did not get far. Badly hurt, he sought refuge in an abandoned ranch house. The next morning he was captured and taken to the penitentiary at Santa Fe, N. M., where he died in the hospital a few days later. Thus the state was spared the expense of his trial and execution.

The other two confederates escaped to the hills and separated. Will Carver remained hidden in Taos country for several years, but the law finally captured him and he was shot at Sonora, Tex., in 1906. The third robber, McGinnis, was caught and tried for murder at Raton, N. M. Sentenced to life in prison, McGinnis was pardoned after five years behind bars.

Some versions of the second C&S holdup mention three accomplices with Sam Ketchum. Whether he took part in this exploit or not, William Walters, alias "Broncho Bill," was tried and convicted of murder after apprehension at Socorro, and sent to the New Mexico state penitentiary for life. In 1917, he was freed and local reports say he fell from a windmill tower in southern part of the state shortly afterward and was killed.

Other gangsters allied with the Ketchums at one time or another also met with speedy ends. Ed Bullin was shot near Steins Pass while robbing a train, Bob Hayes was killed at Deer Creek, and "Red" Pipkin died in a saloon gun battle in Silver City.

TOM was even less fortunate. Unaware of the hold-up July 11th and its gory aftermath, he was riding his horse on July 19th with an easy air that he would not have felt if he had known his brother was dying in prison and two former pals were being hunted like rats.

Black Jack drew rein beside a couple of Colorado & Southern boarding-cars, on a siding, that housed a track gang. The gandy dancers were resurfacing a stretch of roadbed five miles away under the watchful eye of their foreman, William J. Van Winkle. The rider tethered his mount and knocked on the door of a car from whose chimney a thin wisp of smoke curled lazily skyward. He doffed his sombrero as Mrs. Van Winkle appeared at the doorway.

"Good afternoon, lady," he said politely. "I've been riding all day and have had nothing to eat. I'll pay you well for a dinner."

As Mrs. Van Winkle surveyed him from head to foot, Black Jack added: "And I'd like to give my horse a drink, too, ma'am, if you don't mind. He's pretty well tuckered out."

The woman seemed to be satisfied.

"Why, yes," she answered, "I'll fix dinner for you in a jiffy, and meanwhile I'll get your horse a bucket of water."

A few minutes later Tom Ketchum was eagerly devouring his last meal as a free man. He ate everything she set before him, and when he left he slapped down a sparkling twenty-dollar gold-piece on the table.

The woman's eyes widened. "Why, mister," she gasped, "we don't never charge any of the ranchers hereabouts when they eat with us."

Tom insisted: "Well, ma'am, it was worth it. Buy yourself a new dress."

As he went out to mount his horse, which was resting under a tree, he passed the two small children of the Van Winkles playing in the desert sand. The bandit stopped a moment, watching them intently. Then he ap-

proached the boy, patted his head with a self-conscious grin, and gave him a ten-dollar gold coin. After that he edged toward the girl and repeated the act. That simple dinner of plain food had paid dividends of forty dollars in gold!

Naturally, the two youngsters were proud and happy to show their glittering new toys to their father when he returned to camp at the end of a day's toil in the hot sun.

"Look what some man gave us, daddy," the girl said, holding out her gift on extended palm. "He stayed here for dinner."

The boy likewise displayed his gold-piece. "And mom's got a twenty-dollar one," he added gleefully.

AS AFTERNOON shaded into dusk, Tom Ketchum, fully confident that he would soon collect from a train many times the price of that forty-dollar meal, rode his horse out to the horseshoe curve which the C&S track made in rounding Twin Mountain, and tethered it there. His intention was to work the old Jesse James formula, the method he had already tried successfully. After he had walked the three miles back to Folsom, where he was to board the tender of the southbound mail, his costly dinner was fairly well settled.

The train was handled that night by Engineer Kirchgraber. The conductor, Harrington, had met members of the Ketchum gang twice before; so he was not greatly surprised when the mail came to an unscheduled stop a short distance from Folsom and he heard the bark of a gun. He sensed what was going on.

Black Jack marched the engineer and fireman back toward the express car and directed Express Messenger Drew to fall into line. Fred Bartlett, mail clerk, cautiously poked out his head to size up the situation. His curiosity almost proved fatal.

"Get your damned head back there!" the bandit cried, emphasizing his order with a well-directed shot that shattered the mail sorter's jaw.

Black Jack again turned his attention to the engine crew. His next command was: "Uncouple this express car and be damned quick about it!"

Kirchgraber and his fireman tugged at the Miller coupling but apparently it would not budge. The outlaw lost his temper.

"Maybe a bullet between the eyes will help you to yank it out."

At this moment Conductor Harrington entered the picture. The wary skipper, profiting from the two previous hold-ups, had cached a double-barreled shotgun, loaded with buckshot, in a smoking-car compartment. With this weapon he made his way to the front door of the mail car, opened it a tiny crack, and peered out at the sinister form of Tom Ketchum, who was telling Kirchgraber to pull the coupling pin.

Harrington said later: "The four men standing there were probably no more than ten feet from me. Naturally, I wanted to be sure of hitting only the bandit."

Slowly the conductor maneuvered his gun into position. Then he pushed the door ajar and fired. Almost simultaneously he was answered by a whistling bullet from Black Jack's revolver. A brass button on the skipper's blue coat had caught the outlaw's eye. Had the desperado beaten Harrington to the trigger he might have escaped. As it was, the charge of buckshot tore his arm to shreds, while Ketchum's bullet flew wild. The criminal said later:

"I'd have killed him if he'd waited

a fraction of a second longer. I had a bead on his heart."

Critically wounded and with no additional loot for the terrible price he had paid, Black Jack staggered off moaning into the shadows. The men he had tried to rob watched him go. They knew he could not get far. It would be easy enough to pick him up in daylight. Meanwhile, the mail was late and a badly injured mail clerk had to be rushed to a hospital as soon as possible. So the train pulled out, leaving the frustrated brigand alone with the misery he had brought upon himself.

Next morning C&S officials sent an engine and one freight car to the scene of the crime. Detectives who rode this train found Tom Ketchum lying on the ground near his still-tethered horse. The Western "bad man" was too weak from loss of blood to put up even a token resistance. They took him to Trinidad, Colo., where a local surgeon, Dr. Espy, amputated the arm. As soon as he was strong enough to be moved again, the wretched bandit was imprisoned at Santa Fe in the same penitentiary where his brother had just died.

IN THOSE DAYS a New Mexican territorial law decreed death for anyone convicted of holding up a railroad train with intent to rob. Tom Ketchum was placed on trial. After District Attorney Leahy had read the long indictment, Judge Mills asked, "Have you an attorney to defend yourself in this case?"

"No, sir," replied the one-armed prisoner.

"Have you funds with which to hire one?"

"No, sir."

That was correct. Part of the loot from the first robbery had been found in his possession and returned to the rightful owners. Black Jack had no other money. The court assigned a young Las Vegas lawyer, William B. Bunker, to act for him; but this was little more than a legal gesture. Everybody knew that Ketchum's doom had already been sealed. Mr. Leahy demanded a death penalty and produced several witnesses who testified to the outlaw's guilt. Drew, the express messenger, was an amusing witness.

The prosecutor asked: "Mr. Drew, you say the defendant pounded on your car door and commanded you to open it?"

"Yes, sir," Drew responded.

"What did he say to you?"

"Fall out there damn quick!"

"And what did you do?"

The witness raised his eybrows. "Well, what would you have done, Mr. Leahy, with the muzzle of a gun in your face? I fell out damn quick."

The district attorney turned to the prisoner. "Is that true, Mr. Ketchum?"

"You bet your gah-damn life it's true," said Black Jack, with a partial recovery of his old bravado, "and he didn't lose no time, either."

A nervous titter relieved the tension in the crowded courtroom. After that the machine of justice ponderously continued to grind, like the mills of the gods. Bunker's appeal on behalf of the would-be Jesse James was weak and futile. In due time the case went to the jury. Only the ticking of the wall clock punctuated the hush that settled over the spectators as Judge Mills arose to read the verdict.

"We, the jury in the case of the Territory of New Mexico versus Thomas E. Ketchum, find the defendant *guilty*—"

Black Jack evinced no emotion. He was not even looking at the judge. His stolid gaze wandered out a fly-specked window toward the Perico, a small stream that oozed its sluggish way through the prairie. Maybe he found escape from reality by galloping in imagination along the banks of that creek, out toward freedom, toward the great open spaces he had known all his life. The voice droned on:

"—in the manner and form charged in the indictment, and we fix the punishment as death."

Mr. Bunker made a formal motion for retrial, but the judge waved it aside and pronounced sentence: death by hanging on April 26th, 1901. Spectators who watched the outlaw closely for signs of fear were disappointed. The condemned man gave no flicker of an eyelash to show that he cared one way or the other.

THE 26TH OF APRIL dawned mild and clear. A brisk south wind toyed with unresting balls of tumbleweed that dotted the bleak countryside. Stiff stems of buffalo grass nodded. Outside the old courthouse at Clayton, N. M., a scaffold, erected for Tom Ketchum, creaked ominously in the spring gusts.

Shortly after one p.m. the would-be Jesse James climbed the gallows steps, flanked by Sheriff Garcia on one side and a circuit-riding preacher on the other. He walked erect and unflinching. The sheriff adjusted the noose, raised a hatchet to chop the trapdoor rope, and asked:

"You ready?"

"Ready," said Black Jack. "Let her go."

A few seconds later the warped soul of Tom Ketchum rode across the Great Divide, where all pony tracks point the same way.

The Engineer

By S. W. BRADLEY

AS THE TRAIN rolls up to the station gate
Out of the night and the storm
And you rush to the arms of those who wait
And the hearts that are flaming warm,
Do you ever stop as you turn again
To the welcome of kith and kin,
To think of the grimy oily men
Who brought the express train in?

Night, and the plain like a sea outspreads,
Snow, or the lash of the rain,
And the rails stretch out, twin iron threads
In the path of the speeding train;
But the eye in the cab is trained and keen
And the hand on the throttle is true,
And if danger or death has lurked unseen
No one but the train men knew.

In the comfort and ease of the Pullman car
You lounged, at rest and secure,
While the man up in front has guided you far,
Steady and swift and sure;
The country shrinks to the width of a map
Wherever you may choose to roam,
All thanks to the grimy oily chap
Who brings the express train home.

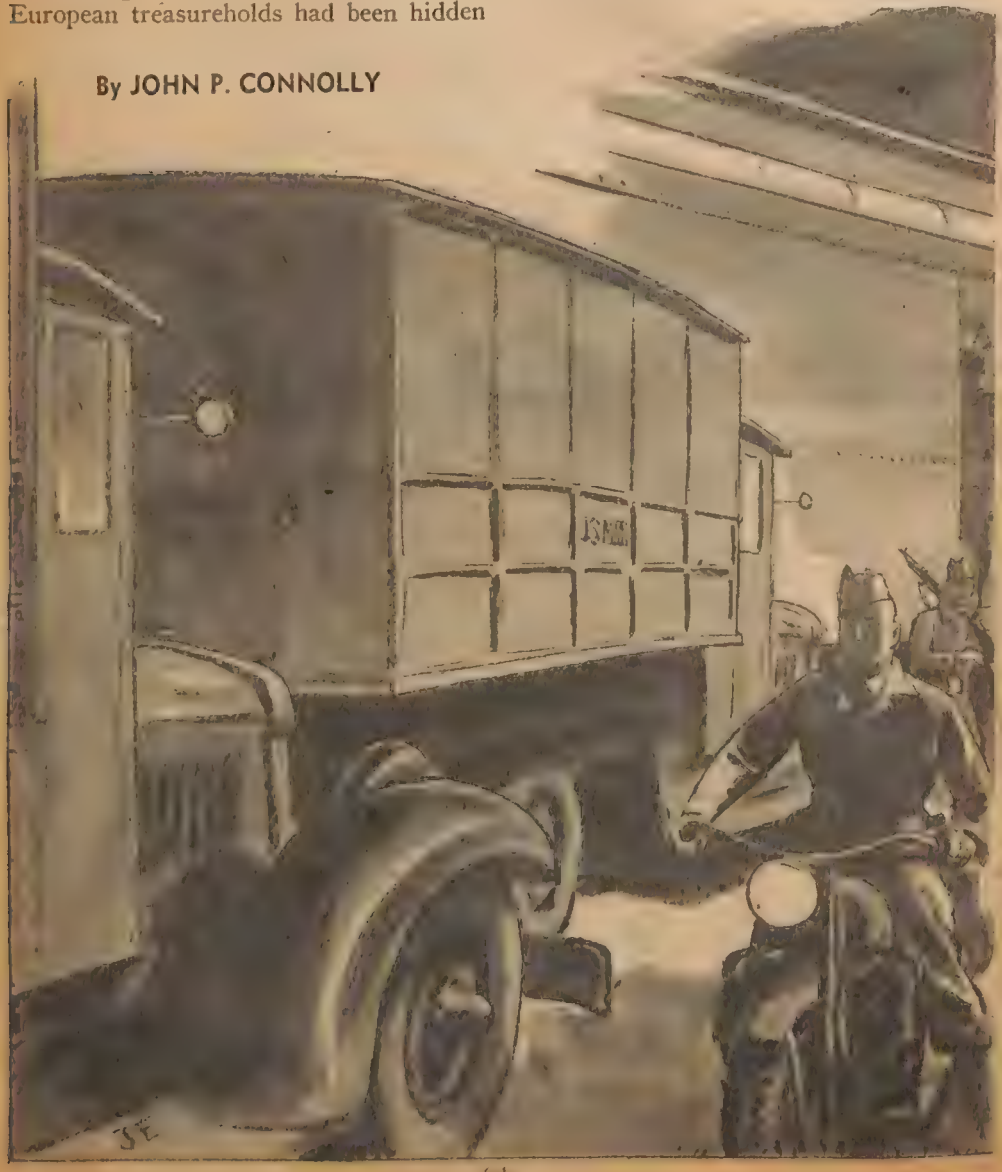
BACK IN THE DAYS . . . . . Harry C. Temple

Twelve Noon: Click, Click, Click

TRUE TALES OF THE RAILS

IT WAS HEADLINE NEWS when I read of the Yank seizure of about two hundred tons of gold uncovered near the German town of Merkers some months ago. This loot from conquered European treasureholds had been hidden down in an abandoned salt mine to escape detection; but the retreating Germans were compelled to desert their hoard, and the news story broke. In contrast to this is the silence that still cloaks the tale of perhaps the largest gold shipment in the

By JOHN P. CONNOLLY



Gold Trains

world, which was transported across American roads about ten years ago.

The experience I had with the gold trains began when the United States Treasury decided to ship its bullion from the overtaxed deposit space on the east coast to new vaults built into the Kentucky hills. Twenty-four million pounds were carried from New York and Philadelphia to Fort Knox during the two six-month schedules from 1937 to 1941. Stretched out in a single line, the 503 cars used would have covered over six and a half

miles of track, a fourteen-billion dollar haul for a successful holdup. But unlike the haphazard storage of the Nazis, chance had no place in planning the move. Loaded under the glare of klieg lights, and the constant patrolling of armed guards, the cargo made its way safely to the electrically-protected cache inland.

Early in the summer of 1936, I first heard of the government project. John C. McCahan, manager of B&O mail and express traffic, called to see me on a business matter too important to be discussed on the telephone. At that time I was Superintendent of Mail and Traffic Express at the Jersey City terminal of the Central of New Jersey-Reading Company. Mr. McCahan told me about the shipment and how it was to be sent parcel post to cut expenses. The only amount paid to the roads would be forty cents per car mile for the storage cars—usual rate for a sixty-foot mail car—plus army fares and cost of all meals. Several railroads were to divide the load, but details would be fixed at a meeting at the Capital.

Soon afterward, the principal lines concerned met in Washington. The Pennsylvania, New York Central, Baltimore & Ohio, Louisville & Nashville and Illinois Central had representatives there, while I looked after the interests of the Jersey Central. Traffic passing over the various routes would merge at Louisville from which point the Illinois Central would move it to Fort Knox.

The late James W. Cole, a deputy Assistant Postmaster General, discussed the requirements. The proposed load was to take approximately 224 mail storage cars —later increased to 503—two Pullman sleepers, a dining car and coach to care for the Army officials, postal clerks and guards who would ride the trains. Each road would have to provide all labor needed for loading and unloading the freight. Meals on board were to cost a maximum of seventy-five cents. Soldiers would travel at Army rates, postal clerks on their commissions—warrants granting free passage—while Pullman fares would be paid at the regular rate.

A twenty-six hour schedule was decided upon, since this would permit time for rest, inspection and servicing the train between each trip. It called for no record pace, as it was a few hours longer than the regular passenger run. After outlining the initial claims, Mr. Cole threw the meeting open to argument, and immediately a Post Office official objected to the use of the B&O route. He stated that the ferry service across the North River to Jersey City was dangerous, and the Pennsy provided not only the most convenient starting point but the shortest line.

I DIDN'T SEE that, and protested at once. It was a strange complaint coming from the man who had been responsible for gold shipments over the Central New Jersey and Reading only a few years before. However, the situation remained unsettled when we adjourned with a request from Cole to maintain silence so as the plans could be given no publicity.

Yet on August 18th, brief releases in the *New York Times* and *New York World Telegram* announced that such a move was in the making. The leak must have been in Washington for the roads kept their bargain. When we heard no more, Mr. McCahan and I consulted higher authorities since we were determined not to lose our share of the traffic. As a result, both the Baltimore & Ohio and the Central received their quota of traffic, and with this decision my work started.

The B&O enters New York City over the Jersey Central tracks into Jersey City and a ferry over the North River. Because I was in charge of all Jersey Central and Reading, mail loadings at this terminal were my job. The gold moved in two shipments: the first began in January 1937 and ended on June 18th of the same year; the second, starting July 26th, 1940, wound up on January 24th, 1941. With only a temporary stoppage from late November 1940 until early the following January, so that terminal rail and car facilities might be open for holiday mails, there was no break in the schedule.

Together, the plans involved 503 storage cars divided between the Pennsy, New York Central and Baltimore & Ohio on an approximate 4:4:2 percentage basis—the Pennsy, 193 cars; Central, 196; B&O, 114. The consist, makeup, handling and loading on the three roads were the same. Even the cost per carload was identical, since the Pennsy's short-line mileage rate had to be met by the other two.

Once it had been decided that we were to handle twenty percent of the traffic, operation work got under way. Certain changes had to be made within the terminal to perfect our facilities. To load the train in the passenger station was out of the question since there was no means for vehicles to reach the carside. We had to use freight track Number 6 which lay fifty feet south of the passenger depot. A team way runs between passenger track Number 20 and this, and using the combined facilities, mail trucks could back right up to the car doors. On the Pennsy and Central the use of elevators to get the gold to the car levels made double-handling necessary in loading.

Before the scheduled trains could be run, the track highway had to be raised four inches to meet the tailboard level of the mail trucks to avoid any abrasion of the gold. The paving in the yard from the ferry slip to the end of the track had to be rolled to make the eight hundred foot driveway smooth. All yard arrangements were directed with an idea of protecting the gold bars from damage.

POWERFUL REFLECTORS multiplied the light in the area where the work was going on. An extra water line was installed so that the train had its own yard supply. While mechanical preparations were being completed, my office was the stumping ground for the men whose planning guaranteed safe delivery of the bullion from the Assay Office in New York to the carsides at Jersey City. New York and Jersey police officers, government service men, plus members of the company forces mapped each step so that it would be about as easy to steal gold from the New York vaults at Wall Street as from the trucks in passage. There was neither time nor opportunity to get close to the yellow bars.

Special ferries crossed with the trucks from 6 p.m. when the loading would begin, until 7:30 when the commuter rush ended. From then until ten, the trucks took passage on the regular trips. The distance from the pier where boats docked up to the first car was a 400-foot drive. But on stormy nights it required real grit to stand in the unprotected space for four and a half hours handling the boxes. Regardless of weather, rapid precision work was necessary to maintain our fixed schedule.

Several nights I timed the arrival of a ferry at Jersey. The average boat lay ten minutes in the slip before being "rung off" on its return to New York. In that time, one and sometimes two trucks would drive off, unload and go back on the same vessel. This meant coordination of both the work and the workmen.

Heavy oak boxes bound by steel straps and secured by a brass telltale rotary lock held the gold. They had none of the ornate carvings of old treasure chests, and the men who cradled them onto skids and bolted them in place never saw a glint of the wealth. But from the tension around the station, the speed of the husky laborers in easing them into the cars, and the worried expressions of the overseers, I could hardly help sensing some strange feeling. Even hidden, the gold had influence on us there. Scorching white light of the floods illuminated the station so that a rat crawling over the boards could not escape detection.

The amount of gold represented three percent of all the gold mined in the world since 1492—the year Columbus discovered America and Indian gold began to flood the Spanish treasuries. Five hundred and three cars were used by the three roads to carry the twenty-four million pounds, which according to my figures would be valued at about thirteen and a half *billion* dollars. A fraction of this load would have rewarded the most daring train robbery, yet there were no attempts made to

hold it up. Watching the progress from my office where the activity was already routine, I decided to cover the movement of a truck from New York to our terminal, so as to get a more complete idea of the work. The trip made such an impression that I stayed up that night to write down the sensation.

INCIDENTS that happen during a time of feverish activity usually go by so quickly that it takes a while to get their meaning. One night after I had been timing the interval between the arrival and departure of a ferry, I was heading back toward the train when Major Carlson came over to me. The major had been detailed by headquarters at Governors Island to command the soldiers on guard.

"Got a pencil handy?" he asked. "Guess I left mine in the diner."

I reached into my pocket and drew out my pencil, a cheap mechanical one. Sometime later that evening, he returned it and without thinking I stuck it into my coat pocket. Not until the next morning did I look at the pencil Carlson gave back and saw that it had stamped in gold "United States Army."

After making my notes with it, I placed it in my desk, intending to return it next time I saw him. But it was only when I was clearing out my office on New Year's eve 1941—preparatory to retiring after fifty years of railroad work—that I found it again. Since then I value it so much I would regret to part with it. The Major Carlson I knew is the same Lt. Colonel Evans F. Carlson, hero of Guadalcanal and of Carlson's famed *raiders*.

IT WAS a few minutes after five when I stood outside the Assay Building on Wall Street. Already the doors of the building had swung open and crowds were pouring out into the cluttered downtown financial section, shoving toward buses, subways and every sort of conveyance. Then from Broadway crosstown over Wall Street came a cordon of motorcycle police, easing up to the curb in front of me.

While an officer got off and strode inside, the others sat at attention on their motors and there was nothing casual about the two 38s hanging from their leather belts, nor the observant way they eyed the alley. A few minutes later four five-ton trucks emerged from the narrow driveway alongside the Treasury, an armed guard seated beside each driver while through the steel slits in the rear I saw guards riding in the back compartment. The escort lined up immediately ahead, and with sirens screeching, the Cavalcade sped down South Street. Rounding Battery Place, they drove up West Street and on to the ferry house at Liberty Street.

As they crossed North River, the guards had every approach covered. Since this was a ferry special, there were no passengers on board. However, if passengers rode the ferry, police saw that no attempt was made to approach the convoy.

The moment we entered the yard, flood lights picked up every movement of the car and its passengers. No one was allowed within limits without showing an insignia which identified all those connected with the gold train. The ban included even Jersey Central officials.

Numerous lamps strung underneath the cars showed every track joint and bolt clearly. All the time the train was in the yard, soldiers with their rifles shouldered patrolled along both sides of the cars, ready for instant action. Inside, postal inspectors and railway mail service men directed the loading, placing and bolting of 500-pound boxes on skids into the reinforced floors. This precaution protected the gold bars from abrasion which might be caused by shaking enroute.

The rhythm of the unloading was faultless. Men worked on both trucks simultaneously with such speed that I had several narrow escapes as I walked through the cars to watch the progress. From that first discharge of freight, trucks kept coming until ten o'clock when 48,000 pounds of gold weighed the train.

My next job was sealing up the storage cars. After bolting the inside doors, guards accompanied me as we turned the government locks fastening the doors on both

sides of each car. This done, we had completed our yard work and headed for the diner for a final gulp of coffee.

SOLDIERS paced up and down alongside the train, awaiting five a.m. when they would pull out. Near five o'clock a Jersey Central engine backed down and coupled onto the drag to make its routine tests. Then the crew took over to get her underway to Philadelphia, first lap on the stretch to Fort Knox. In order not to arrive at the Fort before daylight, we figured on a slow schedule, leaving Jersey City at 5:15 a.m.; Philadelphia, 7:40; Washington, 10:20; Parkersburg, 8:10 p.m.; Cincinnati, 1:10 a.m., and Louisville, 4 a.m.; and arriving at Fort Knox at 5:45 a.m. Central Time. These were the important stops, where inspections were made.

The train consisted of an empty baggage car, combination coach, four to eight 60-foot storage cars loaded with gold, one twelve-section sleeper for postal officials and guards, a sixteen-section sleeper to quarter Army men, a diner, and tourist sleeper for the dining car crew.

I never rode one of the trains over the line, for while it traveled over the Jersey Central to Philadelphia, this was primarily a B&O show. However, I knew the territory they crossed well since I had been over it many times, and I had copies of her schedule and stops in my office. This way I could place her at any moment.

So the gold trains pulled out for Kentucky. But the details of her handling did not end with the outbound movement. On the third morning, the returning consist was due in Jersey City at about ten thirty a.m. The empty skids had to be taken off then and sent back to the Assay Office to be used for the outgoing shipment that same night. Army men aboard had to report at once to Governors Island.

To arrange this, I would call the chief dispatcher's office at eight to learn how she was running and her likely time of arrival. After that, I would notify the Commandant's office at Fort Jay so that Army vehicles might be detailed to the men. The mail service in New York were on hand with trucks also. Finally, the train itself would roll in.

There was no look of triumph on the tired faces of straggling groups of men who alighted, but they seemed relieved as they headed for the cars and drove away.

With the departure of those two and a half billion dollar gold trains out of Jersey City, perhaps my most exciting job and my railroading days were ended. There's a big difference between seeing the things happen and reading about them in my home at 515 St. Marks Ave., Westfield, N. J.

STORAGE VAULT at Fort Knox, Ky., the world's gold capital

Wabash Washout

BACK in the summer of 1888 I made a trip from Moberly to Kansas City, Missouri, over the Wabash, and it's one trip I've never forgotten. I was about eighteen then and eager to become a railroader. Drifting to the trainmaster's office, I found a freight train made up and waiting for the callboy to round up a brakeman. The hunt ended right there, for I joined the crew as head shack.

My conductor, Bob Ash, was a six-footer with an Adam's apple that shot up and down a long skinny neck while he talked or sucked on a corncob whose smell would have chased buzzards from a dead cow. He quizzed me about my experience, and grinned when I told him I had no job and was hungry.

"So you're on the hog, boy!" he chuckled.

"On the hog" in those days meant becoming a boomer later on. It described a fellow who was broke and famished and often unkempt. His dirty shirt was a thousand-miler that could be turned when the collar became so slick that it required a change of face. Ash said no more before

By "SILENT SLIM" ROACH

sending me to the roundhouse for the engine.

She was an old ten-wheeler, and I found her hogger squirting oil on everything that resembled a bearing. When I told him why I'd come, he just nodded and climbed aboard the deck. I could see little of his features for they were more than amply covered with a thick crop of spinach. Leading the kettle out, I coupled onto the train, where Ash stood waiting with the orders to leave town.

Our train consisted of seventeen empty coal cars, six boxcars of merchandise and a caboose that belonged to antiquity. It was well furnished, besides, with the breed of vermin that nicknamed these castles "crummies"; but that was the least of our troubles. We were headed for Kansas City, where the Missouri River was threatening to wash out the tracks which ran along the Harlem bottoms directly across the stream from the city itself.

After reading the dispatcher's warnings, Ash gave the signal and we pulled out. Huntsville, first stop along the way, was a mining town where we cut off our empty coal cars. While coupling on to the rest of the train, I was interrupted by the conductor who tore up from the telegraph office waving a flimsy. He had an order to pick up an emigrant car.

Jim Raymond, the swing brakeman, knew where to find the zulu, so we rode down to the stock pens. Returning with her, we fastened the link and pins, and then strolled off, chewing the rag while the skipper gave the runner instructions. As we passed the zulu, I saw a woman's head stuck out the side, sizing up the situation. Just then the hogger gave two short toots and we hopped abroad. On top of the cars, I basked in the warmth of the summer morning, with hunger the only thing to spoil my comfort.

The usual clatter of the train was occasionally broken by shouting and noise from the emigrant car. I walked toward the cab, climbing over the coal and sliding on to the deck. When I entered Ash and the bewhiskered "Jim Tooter" were in the middle of a hot argument.

"Damn it, man, I've been running trains here since this road was built," shouted the skipper. "I've handled them often and I don't know one that didn't bring trouble. Delayed, jumped the tracks, had smashups—everything happens when you cart one of them cursed menageries."

The runner kept his eyes on the rails ahead while he tugged the matted ends of his mustache. Jim-Tooter carried that moniker from his habit of whistling at every point and event of interest. Now he was silent, but when Ash's rampaging continued, he spat disgustedly out of the window.

We sped down the tracks at thirty miles an hour, which for those times was really ballin' the jack. Soon she wheeled into Brunswick where the Chillicothe branch joins the main stem. Jim-Tooter slowed to a stop just east of the depot to take water, and as the drivers ceased turning, uproar broke loose from behind the tank.

"WELL, it's started," drawled the conductor, lighting his pipe.

He descended leisurely to the cinders followed by the swing brakeman and myself. His statement proved correct. Out of the door of the zulu came a female voice screaming murder at everyone on the train.

"You passel of fools!" the woman shouted. "Are you trying to kill us all?"

Soon her wailing was drowned by the braying of a jackass whose long-eared head shoved through the doorway alongside hers. The racket grew louder until the tallowpot dropped the water crane and began to throw coal at the donkey. Then Jim-Tooter, seeing a chance to exasperate Ash by increasing the din, started the whistle tooting; and by this time everyone in or near the depot was gawking at the head end of our train. The skipper began to curse and wave his arms like a madman.

"Cut that emigrant in next to the caboose," he yelled to Raymond, "after that fireboy takes water—if he ever does!"

Off he stalked to the telegraph office to check on the safety of the track near Kansas City for our orders leaving Moberly had warned that the line might be washed out before evening. Now it was almost noon. Raymond and I stood waiting the orders while the bedlam of the jackass, fireboy's cursing and zulu woman's complaints rose to such a pitch that Jim-Tooter blasted his horn till he had wearied them all.

There was a momentary lull. Raymond signaled Jim to pull up to where we could cut the zulu in next to the crummy. When we had made the switch, the shack assured the rider that she'd have a smoother ride there; and off we went to the beanery. Conductor Ash ate hurriedly and returned to the office. The rest of us took our time before wandering back toward the train. However, as we came near, Ash beckoned to us and we quickened our pace.

"Take the engine and go over to the wye," he said. "There's ten cars of cattle billed for K. C. Rush."

We got under way, while the runner leaning out his cab window grinned down at the skipper.

"Kinder excited, ain't you?" he said. "Don't worry though, we'll be okay from here on in."

Ash snorted and turned toward the depot. Riding the hog over to the pens on the branch wye, we coupled on the string

of rattling cowhorns. After linking the stock to the train, we watched the conductor head for the engine with an armload of tissues. Raymond and I climbed on board a few cars behind the hog to ride in peace; but we didn't have a chance. Before long, Ash signaled us both to come over. Clambering down to the deck, we reached the conductor who pushed his orders at Raymond saying:

"Read them and then tell me we're not running into trouble, and all on account of that car."

His eyes glinted with annoyance as he turned his gaze away from Jim, who looked vastly amused. Ash's pipe tilted toward the runner, and with a deft stroke the engineer eased the nearest oil can over and squirted a few drops into the bowl. It went unnoticed as Raymond continued droning the dispatcher's dope aloud. A few moments later, the conductor lit a match and began to draw on the cob. With a blast of profanity he hurled it to the deck.

"Hell an' damnation! Even the pipe's changed."

All of us laughed at the vitriolic abuse he let loose, for we were in on what had happened. Finally, Ash climbed over the tank and staggered toward the caboose half-sick from the tobacco and oil shot, though unaware of the trick. Left alone, we checked the orders which instructed Extra West to clear Number 3, the westbound mail train, at DeWitt, the next station; also, Extra West to meet Extra East at DeWitt—which meant some neat moves to prevent any delay on Number 3.

JUST then Jim-Tooter pulled the string and whistled for DeWitt. I crawled through the front cab window out to the pilot so as to make a quick jump to lead us in, while Raymond went over the tank to set the brakes as we rolled into the station. Halfway down the passing track, we rounded a curve to see Extra East crawling to meet us. Arriving at the same time, she had decided to get into the clear for Number 3.

Both engineers whistled a short blast for brakes and stopped. The two locomotives stood immobile facing each other while Number 3 was expected at any minute. Then as neither crew would agree to back out, the mail train called for the station. Immediately Jim-Tooter signed for his opponent to give in, but the only reply was scarcely flattering. The battle continued until Ash rushed up and told Jim to throw her in reverse.

"You forget we hold rights over Extra East," said Jim, refusing to budge.

"Damn it, man!" shouted the other. "I'll not argue about rights when you're stabbing a passenger. The rear brakeman's flagged her, and the quickest way to get results is for you to back out. Head down the main line while that bullheaded crew pulls through the passing track, and you can decide the rights in the T. M.'s office."

When we came near Number 3, I dropped off to line the gate for the main again. As our pilot cleared the switch, Jim-Tooter reversed his engine and shot a column of cinders skyward as the drivers clawed the rails to go west. Leading the way, we rode into the depot, the passenger at our heels. While she unloaded men and mail at the station, our rear brakeman opened the switch for us to enter the side track and we did with such speed that we rammed the caboose of Extra East hard enough to shake loose the jaw teeth of their crew. It certainly caused a squawk from our zulu and its inhabitants.

Our train stopped abreast of the westbound mail as the chorus of braying jackass, squealing pigs, chattering geese, ducks and hens rose to a high-pitched crescendo. Coach windows flew open and necks stretched to look at the performers. The show went on while Conductor Ash called the dispatcher, but Number 3 pulled out a few minutes later.

Jim-Tooter whistled off the brakes and we eased west. But before we picked up speed, Ash rushed out of the depot waving us to a stop. The hogger answered with a blast of the foghorn, and we waited for the skipper to come alongside with his handful of paper.

"You and your rights!" he muttered.

Photo from John W. Wood, 123 11th St., Streator, Ill.

OLD-TIME Wabash crew with No. 428: (Left to right) Switchman Homer Short, Fireman Geo. Stump, Engr. Wm. Lewis

"Here's what the DS has to say, after eating the seat off my pants for delaying Number 3 seventeen minutes—which is a lie—we didn't hold her more than three."

"I suppose now you'll blame that on the woman and her animals," said the runner, "because that jugheaded outfit blocked us in the passing track."

"I don't blame her for anything except being in that zulu," retorted Ash, and his voice sounded to me like cold steel. "Here's your proof: the stock we picked up at Brunswick must be unloaded as soon as we hit Carrollton to prevent them from starving to death. Besides that, the river's washed out the track in the Harlem bottoms, so we'll be marooned for days, if not weeks. Now are you convinced?"

"There's nothing to prevent us returning light to Moberly, is there?" asked the engineer.

"Yeah," said Ash, "there sure is. A work train is on its way here from St. Louis now picking up all available men along the road to rebuild track when the water recedes. Boarding cars will feed the workers from the day and night shifts, and we're one of the crews that'll work twelve hours a day handling the men till the job's done."

WITHOUT another word, he gave the highball and we started rolling. While we raced toward Carrollton, there was no talk between any of us. But Jim-Tooter talked to himself as we neared the station.

"If I could only get even with that thick Bollinger who cut us off," he muttered, "I'd be satisfied."

Then for four hours straight we unloaded cows, shunted cars and cursed being caught in the swirl of the highwater's effect. Ash had no trouble getting orders for Missouri City, after we had had a quick meal across from the depot. All trains were annuled so the engineer had an open line to the city, where he jerked the train to a stop without Raymond or myself setting a brake.

Number 3 was standing in the passing track, her engine dead; the crew and passengers were out looking the town over. Bob Ash picked the team track as a good place to store our six cars of merchandise, emigrant and crummy. Then we assembled in the telegraph office to await the arrival of the trainload of workers who were being summoned from section houses, depots and way points along the line.

At about eight p. m. she rolled through the darkened Missouri City, loaded with

brass hats who assumed dramatic poses along the string of flats piled high with materials likely to be needed. The Super's private car was tied to the tail-end and he was out as soon as the wheels stopped. Superintendent Frey advised Ash as to what his crew was to do, and decided to have the men throw a short incline from the emigrant car door to the ground. In this way, the old woman could get her stock out if the stay proved long.

Ties and some crossing plank did a neat job and the bridge carpenter nailed cross strips on top so the animals wouldn't slip and break a leg. Up till now I'd never looked inside a zulu. Lighted by so many lanterns, this one revealed hogs, poultry and horses, as well as the noisiest donkey I'd ever encountered. Someplace in the darkness there were ducks, for we could hear them honking as though they smelled the nearness of the water. The river had become so swollen it reached up to within a few feet of the tracks, and in some spots had widened into small lakes.

AUTHOR, Charles A. Roach, "Silent Slim," is a retired boomer trainman living in Portland, Ore.

I learned that our crew would take on the washout about midnight; this gave us a short time for sleep before being called. The Wabash track paralleled the Hannibal & St. Joe most of the way through the river bottoms, and arriving on the scene that first night offered an unforgettable sight. Both tracks were turned over with the ties standing on end like a picket fence. Trees, broken lumber, farm implements, furniture and everything buoyant had drifted with the rushing water to lodge against the double trackage. Now this twisted mass was to be disentangled. Men sweated in the sun and stumbled under torch lights in water up to their armpits, while bosses yelled and cursed for more salvaged rails and ties. The struggle went on while we lost count on time.

It was a nightmare. All wires were down, but repairs were constantly being made to cut in operators to report on the progress. Yet it was nearly a week before trains were running. On the last day, Number 3 came through while we were at Minneville and stayed there for Number 4, the eastbound mail. Superintendent Frey ordered Ash to return to Missouri City and get started for Kansas City. It was late in the day when we arrived, ready to couple on to our zulu and train.

The cattle and poultry were loaded with little trouble, but the ass was a contrary animal. When he was finally forced into the car, he kicked the slats off the crate in which the ducks were kept. Squawking with glee, they sailed through the doorway, evidently glad to be released from the hot boxcar. A short time later, Ash showed up with running orders, only to become enmeshed in the trouble.

The first thing he tried was herding two large hogs out of a mudhole where they were wallowing up to their ears. The swine were shooed up to the incline with all hands in a circle urging them along. Then one four-hundred-pounder balked, wheeled about and made a nose dive between Ash's legs, bent on returning to his former abode. Sprawled on top of the hog, the conductor's arms circled the animal holding him on while he yelled:

"Hold it, men! Don't let that damned pig get back into the mud!"

His eyes were able to see to the rear, but he was handicapped in viewing where they were heading. Everyone laughed at the wild ride as Porky swerved and shied about, finally diving under the emigrant car. There Ash unloaded, knocked off his mount who scooted out the other side and back into the mud. Jim-Tooter heralded the event with his usual short blasts and Ash's face showed red through the muck.

From collection of Harold S. Walker, Assistant Secretary, R&LHS, 10 Winthrop Ave., Marblehead, Mass.

RAY HIGGINS fired the Bangor & Aroostook's 182 for a hogger who couldn't keep awake. The husky little Consolidation discreetly stalled, by w ay of protest

TRYING to load everything was one of the toughest rush orders I've ever worked at. Ash was furious now, and was little help to us. To increase the tension, the operator came out of the depot just then to know how soon we'd be ready.

"Tell that DS—" shouted Ash, but at that moment Jim-Tooter and the gang got the hogs into the car, so he didn't finish his retort. He joined us in getting them in and nailing up boards to prevent their escape. Their owner was profuse with her gratitude but appeared worried.

"Men, all my Pekin ducks are still out. Can't we get them before the train starts?"

Her quackers had been having a great time diving and circling out over the high water. The conductor had somewhat calmed down now, and couldn't refuse the woman's plea for help.

"Tell the DS I'll be ready to travel in about ten minutes—just got a few ducks to load," he called to the operator.

After twenty-five minutes of failure, the owner thought of luring them in with bread crumbs. This quickly induced the ramblers back into their crate and Ash hurried over to the op for orders, letting off a few caustic remarks about his troubles.

Without any further delay, our mud-covered crew was on its way to Kansas City. Landing there, we put away the train; and as I was washing up in the crummy I heard a queer racket in one of the lockers. Raymond investigated the matter and found a big Pekin duck. The conductor looked carefully from one to another, trying to figure out who had put the bird into the locker. However, we all looked surprised and no one showed guilt.

"Well, that's the first thing I ever got out of an emigrant," he grinned, suggesting we make a stew out of the unlucky fowl.

I winked at Raymond and nodded toward Ash, who was now carefully turning over his reports. He was taking it so calmly I was sure he had swiped the duck himself to make up for the grief over the whole carload. Raymond winked back and chanted:

"Well, anyway who the hell don't like
duck stew?
So put on the pot and let it get hot.
We'll all eat the duck, while the duck we
got."

How he made up the rhyme so quickly I didn't know, but we all laughed, each one perhaps at a different thing. We all knew there was a thief in the crew—but what the devil? We all liked duck stew.

Bangor & Aroostook

By RAYMOND HIGGINS

DETERMINED to ride some day on the right-hand side of a cab, I began railroading back in 1918 when I was fourteen. Five years later, it seemed as though I'd personally greased every locomotive owned by the Bangor & Aroostook that passed through the engine house at Millinocket, Maine. My job there as engine cleaner was to fill the rod cups with pin grease, oil the lubricator, clean and stock the headlight, marker lamps and cab lights, and draw the supply of cotton waste, fusees, torpedoes and the oil necessary for each locomotive. In addition to this inside work, I would help coal, sand and dump the ashpans on those pulling straight through the yard.

A sixty-ton hopper measured out tonloads of coal into the tenders. The flow from the hopper to the bucket was regulated by a gate operated by chains, and the front of this bucket was hinged and controlled by a trip. The hostler and I would never take time to gage the amount

needed. We'd just trip the bucket and let coal run till the tender was full. Later when it came to marking up the tonnage —as we were always required to do—we'd make a rough estimate of what she took. This not only saved time, but some engineers who got good measure treated us to fruit or pie.

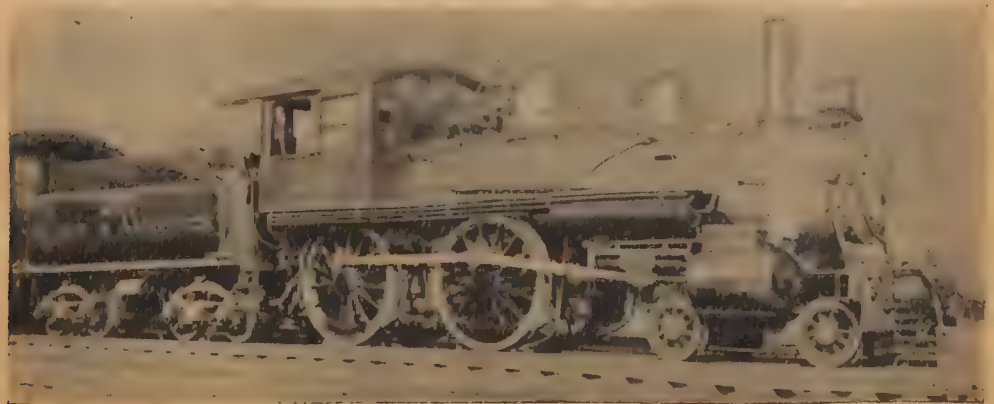
"Zip" Borden, the hostler, and I worked together regularly in this way. He was a good sport, no matter what happened. One night when we had tripped the bucket, the gate broke suddenly and there was no way to stop the downpour. The pair of us stood by wondering how long it would last, as the tender pile mounted higher, spilling out over the sides. But luck was with us, and when the hopper was empty, only ten tons were spread over the ground. Grabbing scoops, we went to work clearing the track for the engine to leave the yard.

Another time we were coaling a through freight, and the stream of fuel grew less and less. Except for its corners and sides, the hopper was empty. Zip climbed up to the top to loosen the coal, and coming down the inside ladder, he slipped and fell toward the bucket. I heard him yell and, not knowing what to do, I opened the chute. Out came Zip, landing in the tender and soon buried by half a ton of coal that followed before I could close the gate. But not even his sense of humor was hurt by the fall.

Gradually I picked my experience on the road by acting as engine watchman at the scene of derailments. Whenever a wreck occurred I'd go along to help clear the track. Firemen were scarce during the winter, and soon I was shoveling coal on the yard goat and runs on the branch line. Then in the spring of 1923 I tried out for regular fireman, but was ten pounds shy of the minimum 150 pound weight. It was not until six months later that I made the grade.

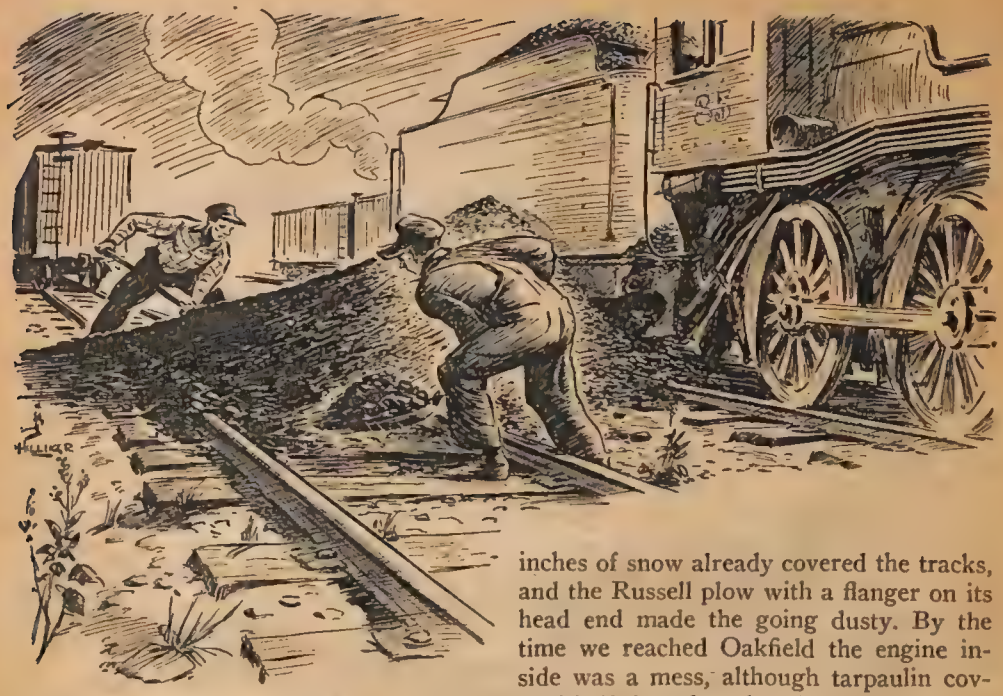
I fired all classes of jobs running out of Millinocket, for I wanted to stay at my home terminal. Extra expenses and poor accommodations were two things I could do without when there was plenty of work around town. As often as possible I handled switchers and by doing so left myself open as relief man, because every fall new men were hired. These fellows would eventually wind up at Oakfield for the turn-around runs—Oakfield to West Seboois and back. Unless the engineer or brakeman helped them out, they'd usually fall down on the job and on arrival at Millinocket I'd be asked to take over. This would land me in Oakfield until another fireman could be found.

There weren't many boomers around my way. I met only one who showed up every fall and broke through the winter. When he failed to show up one year, we learned he'd been killed while braking on



From Chas. E. Fisher, President, R&LHS, 20 Wilde Rd., Waban 68, Mass.

MANCHESTER built this BAR eight-wheeler in 1894



GRABBING scoops, we cleared the track for the engine to leave

the Boston & Maine in Boston yard. A man known as "Boomer" was head shack on the first turn-around out of Oakfield, a job that had one green fireman after another till I was asked to act as relief. When I entered the cab, that fire was some mess. Number 183, a 2-8-0 engine, had a firebox full of green coal level from the door to the flue sheet, except for one spot burning in the right front corner. We doubled out of Millinocket and all I had to do was use the hook and feed that one spot. The uphill run to West Seboois, fourteen miles away, just about burned the bed of coal.

THE company had several standard or ten-wheelers which were easy to fire. Some of the 90 class were superheated and equipped with an air-operated firedoor and power reverse. I fired the 93 often, and I still remember one trip I made driving a snowplow. We were called at 4:30 p.m., for an extra north to Oakfield. Ten inches of snow already covered the tracks, and the Russell plow with a flanger on its head end made the going dusty. By the time we reached Oakfield the engine inside was a mess, although tarpaulin covered half the cab and tank.

We turned on the wye and pulled down to the water plug near the station. Number 8, the passenger train, was late and travelers from the Ashland branch stood around waiting for her. Since we were pulling out ahead, I was busy filling the tank when I saw a well-dressed man with a suitcase leave the platform and head for our train. I thought he had entered the caboose, but as I climbed down to the cab I saw him stretched out on my seat.

The hogger and he were lodge brothers, and the stranger had always wanted a ride in a cab. This was it. Both of us warned him what he might expect, but he only laughed. For forty-four miles we made passenger train time to the terminal, with snow whirling up from the tracks as thick as on the trip north. Yet nothing dampened the spirits of the rider, though his clothes didn't escape in the same condition.

I used to fire for an engineer who fell asleep on the job, as though he never got enough during the day. When we left Oakfield with Number 182 dragging 71 cars, he asked me to wake him up coming to

From Charles E. Fisher

ON KP DUTY since 1901, the Bangor & Aroostook's 62 has hauled enough potatoes to keep the Maine road in the chips

the hill. Passing Little Hard Scrabble at Swede's Curve, seven miles north of Millinocket, I woke him to get ready for Big Hard Scrabble, and then went back to firing. In the sag between the two hills where hoggers pick up speed for the stiffer grade, we gradually slowed, and realizing he was asleep I left him alone. Just before we stalled he came to; later he explained doubling by saying the train was improperly made up.

One winter the same hogger handled a snow-spreading job. The crew worked between Millinocket and Oakfield, clearing side tracks and yards with a train made up of a wing plow, spreader, engine, caboose and flanger. Returning on a high-ball run, a mile north of Isle Falls, the left wing of the spreader flew open and knocked down several telephone poles before hitting the side walls of a steel bridge. Up until then the crew had known nothing about the accident. But as the plow and spreader got across safely, they broke loose from one another. The engine just cleared the south side and turned over. Luckily, the crew were only slightly injured and soon were back on the job.

On another occasion I was called for a doubleheader from Millinocket to Oakfield, hauling sixty-three empty reefers to help with the Aroostook potato crop which was just in season. My engine was a small 4-4-0 just returned from an overhaul job in the Derby shops, and we were coupled two cars behind the lead because of a bridge at Grindstone. We were on our way when I heard something snap below my feet. I stepped down as the stiff-shackle let go, tearing the whole works between the engine and tank loose. The brakes on the train set in emergency immediately, but the lead engine dragged us five car-lengths before the runner realized what had happened.

Dumping the fire we backed up to chain on the tank. Then the head locomotive pulled us into a siding at the top of the hill. The conductor tried to contact the dispatcher by phone, but failed to reach him. As the hogger couldn't work off all our steam while being towed into the siding, I stood guard while he rode the freight into Sherman to report.

It was then beginning to grow dark in the loneliest place I've ever been. But soon

From Charles E. Fisher

RAY didn't get to enjoy the warm comfort of these BAR hacks

I heard a bellowing off in the distance, steadily coming nearer. The relief engine with a tool car and caboose was a welcome sight, and in no time the mechanic—my brother Charlie—had us on our way back to the station. But engine 206 had several breakdowns before she finally reached her destination.

ONCE I fired for a hogger called "Injun Jack." During hunting season he carried a large caliber revolver hoping to get a shot at deer which were plentiful along the right-of-way at certain times of the night. But whenever that man had his gun, they seemed scarce; and Jack never got a chance while I was with him. Once he got a deer with a coal maul, when I was firing the turn-around out of Oakfield, his home town. Returning from West Seboois about daybreak, our train crawled slowly up Dyer Brook hill. As Jack stood in the gangway getting some air, he saw a buck deer jump up from the grass and dash toward the woods. It tried to clear the right-of-way fence, but its horns caught in the wire. Grabbing the maul, Jack leaped off the engine and killed the luckless beast. With the brakeman's help, he loaded it on the tank and the entire crew enjoyed deer steaks for breakfast.

Deer and moose were common sights on every trip except when we wanted to see them. A maintenance man from the factory that installed a booster on the tender of engine 183 made occasional trips to check on its performance. I fired her one fall when he was there and witnessed his disappointment when run after run gave no sign of an animal. Perched on the cab window-sill ready to spy anything, he had no luck. The night before he left, we started out earlier than usual and he decided to stay behind to catch up on reports. That trip a young bull raced us for a half a mile through open fields; and on the return trip we saw three deer and a full-grown cow moose.

One evening a southbound freight killed a moose four miles north of Millinocket. Taking on coal at our engine house, the hogger reported the accident to the crew; and later on his return from West Seboois, he informed the yardmaster who in turn notified the game warden. By the time that officer reached the scene there was little sign of the victim. The gang had taken a pump-car and helped themselves to moose steaks.

From Harold S. Walker

BARBER-POLE crossing sign on the Bangor & Aroostook omits familiar word "Stop"

A certain engineer along the line was quite a joker. Bears were then very com-

mon in a wood near the West Seboois station, where the station agent had a fine time hunting. Having shot a cub bear, he offered it to this engineer, who carried it with him to Millinocket. There he called up a friend who was clerk in a grocery store.

"Want to buy some bear meat?" he asked.

"Sure," laughed the other, thinking he was fooling. "Bring it down."

Jumping into his car, the hogger took the dead cub wrapped in paper. Marching into the store, he laid the package on the counter.

"There's your bear meat," he remarked, and walked quickly out of the shop.

With some surprise, the man opened the parcel and discovered the hoax. It cost him half a dollar to hire a kid to bury the carcass.

NEW firemen learn something every trip. Some engineers will tell a boy the tricks of the trade; others will take the scoop and show how it's done. I got by several weeks firing Consolidations with a light fire, but the firebox was so big I was kept busy though I never had a steam failure.

One fall I bid in a local run between Millinocket and North Maine Junction. Its 320-pound hogger was the biggest man I knew to ride the head end. I'd been there a week and he knew I carried a light fire. Afraid I'd lose the whole works if he should suddenly start pounding the old girl, he left his seat one day as we waited for a meet at Norcross. With hardly a word he bailed coal until he had half-filled the box. Then when the fire suited him, he grunted:

"Now, kid, you've something in there besides the grates."

"Well, I'll have something else, too," I replied, "if all that green coal causes a steam failure."

Of course, it didn't; and from then on I always carried a heavy fire. Number 188 was a free steamer anyway, but with a good fire around the doors, in the back and along the sides, my work was much easier. Besides, it didn't use any more coal and even with banks in the firebox, I didn't use my hook very often.

Business was good, and in 1930 I qualified as hogger. During the winter there was plenty of running, though mostly yard switchers. Even so, regular runners could have the spare trips if they wanted it. I held on to firing the afternoon switcher and would cover up for the engineer when an opening came. But running a switcher is the least exciting job of its kind, and there was no experience for a new engineer in braking trains.

The depression began to be felt the next year. Trucks were hauling potatoes out

From Charles E. Fisher

MAINE carrier's 4-8-2's are handsome in appearance. A new one, the 109, was delivered by Alco this March

From Linwood W. Moody, Union, Maine

LIGHT PACIFICS have 69-inch drivers; are kept immaculately clean

of Aroostook County—a crop which formerly went by rail—and I was lucky to hold onto my firing. But in 1932 the working schedule was changed giving spare running to the oldest qualified fireman so I had a chance to hit the road again.

Doubleheading from Oakfield to Northern Maine Jct., I changed at Derby for 193, a Northern Division engine fresh from the shops. We should have received an order restricting our speed to thirty miles, but the message was mislaid. The engineer on the lead usually exceeded the speed limit, but this time he outdid himself. Clattering by Hudson on the double iron, we were hitting near sixty, which is rough going for an old Consolidation, a low-wheeled freighter not built for speed.

About five miles further on, the fireboy said there was something breaking loose on his side. I whistled the lead engine to a stop. Looking her over, I found the left valve stem had gotten so hot it had frozen and burnt completely off. Disconnecting that side, we traveled into North Maine Junction, where I changed for Number 184 for the trip back.

The brass hats blamed our trouble on lack of oil—which was true, but high speed had caused the shortage. The engine was new all around and equipped with the old-style cab lubricator with hand-set feed. I knew I was lame by not signaling the engineer before there was any chance of trouble. Since my record was clear and I knew I'd get off lighter than he, I took the rap of four days' suspension. This was easy penalty when the roundhouse betting was that I'd get fired.

SHORTLY after this run, I caught a snowplow job from Millinocket to South Lagrange and return. Three miles north of West Seboois on our way back, the fireman thought he smelled something burning, and I stopped to check. Everything looked okay, so I continued on without an accident. That five minute delay brought a letter from the Superintendent a few days later, demanding explanation, saying the oiling should have been done when we stopped for water at West Seboois.

The following day, I was running a switcher when we all were ordered to attend a fuel-saving lecture. The Super was a square man, and after the meeting I told him my side of the story, how having once been suspended for lack of oil I was taking no chances. He advised me to write him a letter giving these facts, and then to forget the whole matter. I did just this.

Early in 1933, my health kept getting worse. I couldn't get rid of colds and my strength was going. On a run a mile south of Schoodic one Sunday, the left back wedge began to pound and the right pony box was running hot. Crawling under to pull the wedge down with the brakeman's help, I lay there straining to move it while water from the injector flow dripped down on me. The next day I had a worse cold; my next trip was my last.

Called at five a. m., I left the station with a 2000-ton load and headed into West Seboois, where we were to pick up another 1000 tons. I got the sign to back the cut onto the train, and reached for the reverse lever to hoss her over. It would only come halfway. The fireman and I checked the gear, but could find nothing wrong until I climbed up the ladder attached to the gear frame. I saw that the top radius pin had worked out and the reverse bars struck it every time I tried to move it over. After twenty minutes we were off.

It was foggy that morning, and section men were putting in ties having their replacements strung along the tracks for miles. This made it almost impossible to see a yellow flag if one were out. I was making the required speed of forty miles an hour past Adams, when I shut off steam to drift down the seven mile hill. Idling along, I kicked off the brakes to let them recharge before I made Deans, five miles south of Adams.

I'd no more than shut them off when I struck a couple of guns at the point of a reverse curve. Searching through the mist, I could see no sign of a flag so I let the train slide to give the compressor as long as possible to fill the reservoir in case of an emergency stop. Sure enough, swinging around the last curve we saw a yellow signal just visible among the ties, and in the distance just north of the crossing at Deans hung a red one.

I wiped the clock and prayed that the old girl would stop in time. She did all right, though when we stood still the engine had passed the red flag. Immediately the brakie jumped off and raced ahead to where section men were unloading old ties from a pushcar, unconcerned by what had happened. They seemed to think we could stop regardless of conditions, and thought nothing of short-flagging us.

The quick stop snapped a knuckle a few cars from the rear. Once we put in a new one, we were ready to continue. Everything went fine for a few miles until I had to make another emergency reduction coming into South Lagrange. This time a defective joining broke. I wired ahead to North Maine Junction for spare parts, but when we arrived there the mechanics delayed us forty minutes hunting them. Eventually we did make Searsport.

Following an eight-hour layover, we returned to Millinocket. I never made another road trip, nor had to answer for the delays on my last. Before the brass hats got around to investigate, I was booked sick. For several days I had tried to manage the yard switcher and fire on the branch line, but it didn't work out. I decided then to lay off to get a doctor's checkup. When it came his verdict was lung trouble, and the shelf for me.

There have been plenty of railroaders in my family. My father was a telegrapher and station agent; and six of my brothers have been employed on the Bangor & Aroostook at one time or another, though only three are on its payroll now. I've had my chance at railroading, and though it's over now it has given me memories to fill a lifetime.

AN OPEN LETTER FROM GENERAL GRAY

BLACKMARKET activities in Europe have linked together the Army Military Railway Service with French racketeers as guilty of diverting military supplies from vital Allied lines into profiteering outlets within Paris. In defense of the railroad men who have actually had little part in these operations, Brig. General Carl R. Gray, Jr., Director General of the MRS, has issued an open letter to his soldiers, and to all interested in their case. While there is no denying the condition, it exists, General Gray maintains, not because of the dishonesty of former railroaders.

"The railroads of America actually crippled themselves," he writes, "to give us experienced officers and enlisted men. In order to have the necessary railroad experience, most of these had to be above Army age. Many of them served in the last war. With particular reference to the 716th Ry. Opn. Battalion *(always named in connection with the black market)*, this Battalion is composed of 887 officers and enlisted men; only 349 were even questioned and 160 brought to trial. Those with railroad background represented only three-tenths of one percent of the total strength of the Military Railway Service in this theater."

M.R.S.–*Its Terminals Are Half the World Apart*

COMPLETION of first Military Railway Service run from San Fabian to Manila since American occupation of Luzon was marked by special ceremony featuring address by General Douglas MacArthur

Photo by Pvt. George Aarons, U. S. Army

MacARTHUR EXPRESS has its counterpart in the "Cassino Cannonball." Italian guard-van used by MRS carries everything but Bozo Texino's autograph

Electric Lines

conducted by STEPHEN D. MAGUIRE

Riding the Running Board

By JOHN A. MILLER

RIDING the running board of an open trolley was once the most popular feature of electric railway service. It combined the thrill of hitching on to a swaying car—bracing yourself against the wind and the curving tracks—with the practical attraction of a free means of travel. Until open car operation began to fade soon after the last World War, it was not an unheard of thing for as many as one-third of the passengers to ride the boards.

The peak year for open trolleys in this country was probably 1917. Though no one knows how many were actually in use then, guesses vary between five and ten thousand, with the latter more accurate. In that year, Boston owned 1,356 open cars; the neighboring Bay State Street Railway (now Eastern Massachusetts), 1,108; Public Service of New Jersey, 700; the Connecticut Company, 688; Baltimore, 520; Detroit, over 200; and Philadelphia close to 100. Since these are only some of the outstanding systems then operated, the total number in America during 1917 ran little short of ten thousand.

First open cars appeared in the horse-car days. Then they were 6- and 7-bench vehicles, fragile in construction, and protected overhead by canvas stretched across a timber roof. The posts at the end of each seat formed the only side props, so that the body was light-weight and little burden to old dobbin. And while its structure spared the horse, its capacity was financially sound. The average 6-bench car seated thirty with space for more than a dozen standing on the running boards and between the seats, while closed cars of that era had seats for twenty and little standing room.

From the viewpoint of economy and pleasure both, these air-conditioned models were a success. Only when they built them bigger did the matter of collecting fares become an important item to consider. However, claim departments kept up a constant struggle with operating men over their use. They argued that accident costs were outrageously high, caused by passengers falling or being thrown off their perch by other vehicles. Yet the indisputable record of increased revenue was the operator's answer to higher costs, and for a long time open cars stayed in service. Eventually, it was the loss of fares due to the number of free riders that put an end to them. The introduction of the pay-as-you-enter type of carrier in 1909 sounded the death-knell of the open car.

WHILE THE QUESTION of which is the first electric railway in the United States is still argued, no one denies that both contenders for the title had open car equipment. Frank Sprague's Richmond Union Passenger Railway, which started with forty open cars, has remained in continuous service since 1888, now as part of the Virginia Electric & Power Systems. The Capital

CAPITAL trolley routes intersect within shadow of Capitol's dome. Electrification of Washington & Georgetown, in '97, saw heavy purchase of open carriers

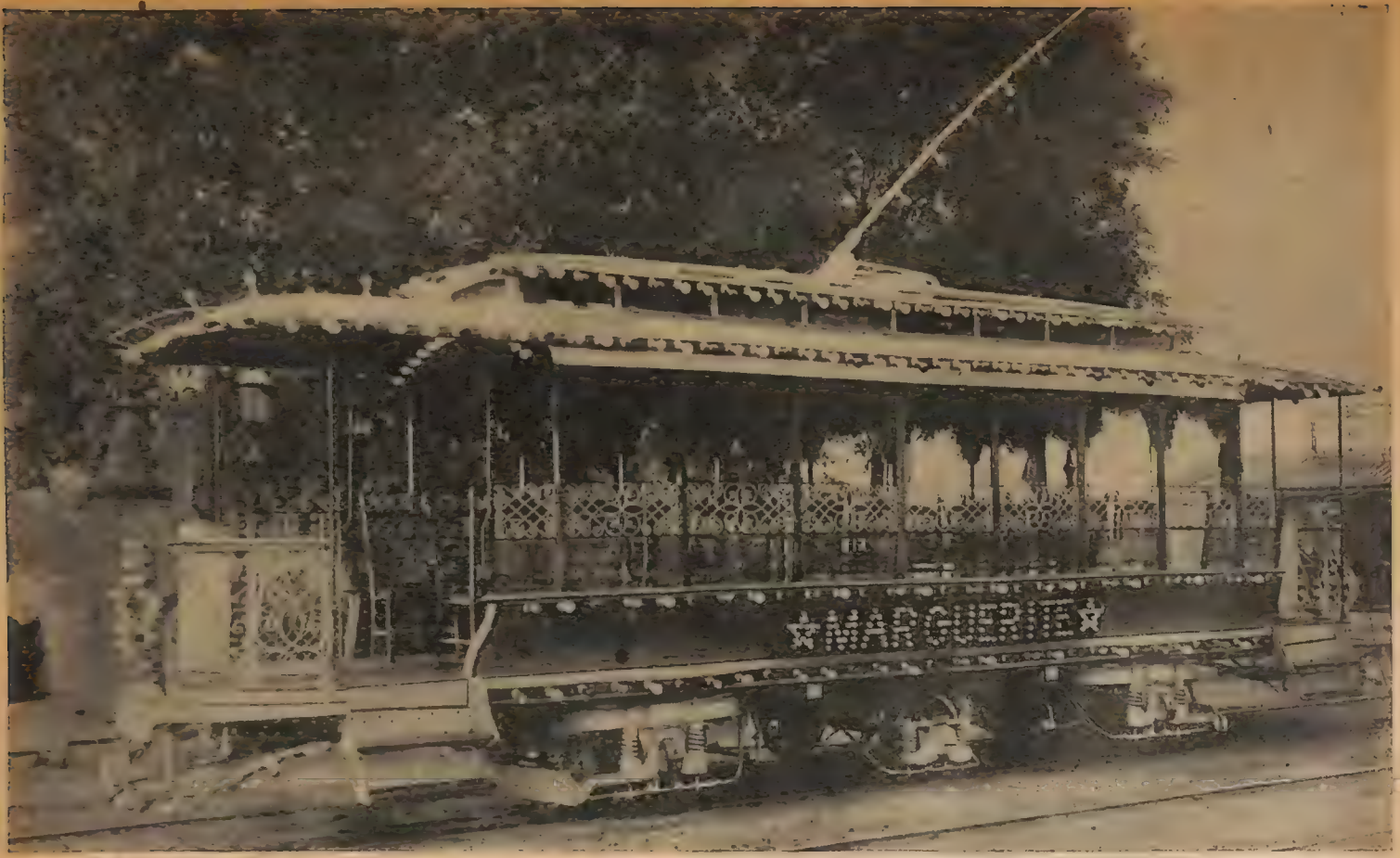
City Line in Montgomery, Ala., founded and operating a year earlier than its rival, was gutted by fire shortly after electrification. Because its power house had been destroyed, mules took over the motive problem.

Trains of open cars were run on the Nantasket Beach branch of the New York, New Haven & Hartford—the first railroad line in the world to be electrified. Unlike most passenger equipment, their cars had triple running boards and passageways between them, whereas most city service trolleys had either single or double boards.

Ten benches were the maximum for early single-truck cars. This included two platform benches: one directly behind the motorman, the other facing toward the rear on the back platform—both prized positions for passengers. When double-truck equipment came into style, the size of the cars was increased. Most cars were double-enders and the running board on the blind side was folded, hooked up in such a way to discourage passengers. Even so, a few daring spirits took to riding blind.

Chicago Union Traction Co., now owned by the Chicago Surface Lines, built a metal giant with thirteen benches called the *Spooner's Special*, used for moonlight excursions. But the leviathan of trolleys was the Public Service of New Jersey's sixteen-bencher. This seated 96 passengers, and a total of 190 cars of this series, numbered 4001 to 4190, were constructed in that company's Plank Road shops.

No conductor could get all the fares from a rush-hour swinging load. With double running boards, he had to be an acrobat to move from one end of the car to the other, and it would have taken an elephant's memory to remember who had paid and who hadn't. For this reason the revenue dropped somewhat in proportion to the increase in



LUMINOUS CHARM of *Marguerite* would have been lost in a dimout. Early car on Milwaukee lines offered luxury of individual chairs, fringed and tassled side drapes. Absence of running boards was style note in de luxe open trolley

the size of the open surface car.

Curiously enough, the open cars were most popular in the North where their season was relatively short. The South lacked the same enthusiasm and they were used only to a moderate extent. Generally, the open cars were really only cheap, light bodies without any running gear. Trucks, motors, controllers, etc. were taken off closed cars for the summer and installed on the open cars. The change occurred about the first of June and lasted until the first of September; and while it was fine from the standard of economy, it had serious disadvantages during bad weather.

CROSS-ISLAND trolley on Martha's Vineyard. Single-track open cars were used on Massachusetts resort's Oak Bluffs Street Railway

If your trucks, motors and controllers were installed on open cars, you had to run these cars regardless of how cold and rainy the day might be. Most open cars had permanent bulkheads between the seats and the platforms, as well as canvas curtains on shade rollers between the posts as storm protection. These could be rolled down without too much difficulty, but at best the vehicle was uncomfortable. Passengers often sat on the backs of the seats with their feet on the benches in order to keep dry. However, there were some companies that completely equipped their summer trolleys and these were fully prepared. They ran open cars when the weather was clear and changed back to the box cars if temperatures fell.

INTRODUCTION of the pay-slot trolley in 1909 was the beginning of the end for the pleasure trippers. Several lines tried to convert their open cars to the new method of fare collection by screening the sides, eliminating the running boards, and placing an aisle down the center. But this never caught the public fancy, as its wide-open character was spoiled. It was the ease of getting on and off the running board that held the appeal.

A short boom during the war years gave the hybrids a new lease on life for a brief period. Any vehicle that would roll was in demand. In cities like Washington where crowding jammed all means of transportation summer and winter equipment rolled over the streets, since that company owned duplicate motors, trucks and controllers. Passengers called them *pneumonia specials,* but still they rode the icy carriers. In other cities, the sides of the trolleys were shut in and heaters installed.

The last open car used in regular service in Philadelphia ran on September 8th, 1918. This refers to general traffic throughout the city, since the nine-mile Fairmont Park run —routed through Philadelphia's large park area—still maintains open-car service from May until September; and in 1919, the trolleys carried baseball crowds. In Chicago, open cars vanished as early as 1912, while New Jersey held on to them until 1918.

Today, only three electric railways run the specials. The Connecticut Company filled 61 open cars on November 4th, 1944, when New England turned out to see Yale play the Dartmouth football team. At Wildwood, N. J., the Five Mile Beach Electric Railway holds a half dozen single-truckers for its summer traffic. Fairmont Park Transit Company keeps up a summer schedule of day and night open trolleys, but this line is the only semblance of the regular use of open-car equipment which was universal in our country twenty-five years ago.

Coming next month: **New Jersey's Beach Trolleys**

Carbarn Comment

CONGRATULATIONS to the Shaker Heights Rapid Transit, one of the most progressive electric lines in the country. Formerly known as the Cleveland Interurban Railroad, the SHRT celebrated its 25th anniversary April 11th.

Steve Maguire

Only a year ago, Shaker Heights—whose growth was due largely to the convenience of this rapid transit line—purchased the electric route which links it with downtown Cleveland. Present plans seem to indicate that Mayor Van Aken and Paul Jones, transportation director of the Heights, intend to exploit to full advantage its possibilities as a modern railway. Twenty-five cars will be added after the war, and service extended to tap the city's other populated sections.

Built by the Van Sweringen brothers at the cost of $5,000,000, the short line was an effort to develop their vast realty holdings in Shaker Heights, a small community six miles from the Cleveland city trackage. The first car passed over the rails on April 11th, 1920. Then in 1930, after the Van Sweringens had purchased the Nickel Plate route, the line stretched into downtown Cleveland.

The *Cleveland News* said recently: "The line is a legend in American transportation history. It survived when Ohio lost 86 of its 88 traction roads. It operates through an area where most riders own one, if not two, automobiles. It carried 500,000 passengers in 1929 and has boosted that total to 6,000,000 last year."

Equipment used originally included standard Cleveland-type city cars with trailers, speeded up for service on the right-of-way. In 1936, seven fast interurbans were purchased from the abandoned Aurora, Elgin & Fox River. In 1940, six more were bought—third-hand from the Inter-City Rapid Transit—and these were among the most recent and best cars built by the Cincinnati Car Co.

Speed accounts for much of the line's success. Its 9½-mile run from the Heights into downtown Cleveland takes only twenty-two minutes, including 16 stops enroute. Since this pace could not be equalled by a vehicle using surface roads, there is little chance of its being superseded by a quicker means. Completion of SHRT plans for modernization of equipment and extending service should guarantee long life to this electric railway. Below is a roster of its equipment to date.

Photo by Alfred Comstock, Leonia, N. J.

FROM MEMORY'S ALBUM: El trains no longer rumble over Brooklyn Bridge; neither do photographers angle their cameras from its planked promenade

Shaker Heights Rapid Transit Equipment

Nos.	Builder	Year	Former Owner
1-32, 36	Kuhlman	1914	Cleveland city cars
53-55	Kuhlman	1914	Cleveland city trailer cars
60-65	Cincinnati	1929	Inter-City interurbans, bought from Indianapolis & Southeastern
300-306	St. Louis	1923	Aurora, Elgin & Fox River interurbans

Non-revenue equipment includes NOT&L freight motor (No. 78), line car (No. 101), and flat car (No. X-12)

WEDDING PARTY chartered a trolley to transport them to church when Frank Donovan, Jr., well-known railfan and occasional contributor to *Railroad Magazine,* was married recently in Minneapolis, Minn.

Frank and his wife, the former Miss Janice Goerner, a nurse, hired a Twin City car to reach the church. Accompanied by 70 University of Minnesota students and other friends, they rode through downtown Minneapolis singing folk tunes, including *The Trolley Song,* to musical accompaniment. Following the wedding, the Donovans took a Soo Line train to central Minnesota for a honeymoon. The bridegroom was formerly employed by the Santa Fe, the Pacific Electric, and the Association of American Railroads.

* * *

COMPLICATED power collection on the old Washington, Baltimore & Annapolis is described by a former WB&A employe, G. H. Dexter.

"Leaving Baltimore for Washington," he writes, "one trolley pole was used on 650 volts direct current. But as soon as you reached city limits, you threw in a dynamotor switch jumping the current to 1100 and later 1300 volts DC.

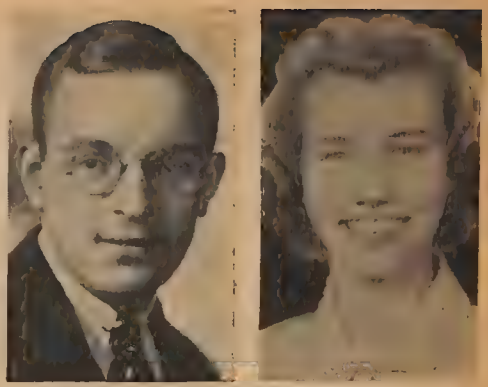
"This carried you to the District of Columbia line where you would cut out the dynamotor switch and use two trolley poles on 550 volts AC. When you came to the main part of the city, an underground third-rail plow was put on below the car and the poles pulled down. Finally at the terminal on K Street NE, the plow underneath was reversed. A return trip required the same number of changes —a nightmare for a new motorman."

* * *

DALLAS streets will have their initial PCC cars by July, reports Harry R. Davis, 5823 Monticello, Dallas 6, Tex. Twenty-five streamliners are expected in use on the Ervay and Seventh Street lines. In addition to these, easy travel will be amplified by the delivery of 30 trackless trolleys, which may replace streetcars serving the Vickery-Capitol line.

* * *

YOUNGSTOWN & SUBURBAN RY., one of Ohio's last interurban routes, was merged with the Pittsburgh, Lisbon & Western, a steam road, last January 1st. According to Bill Vigrass, 1494 Cohasset Ave., Lakewood 7, O., these lines now operate as the Youngstown & Southern Ry. Built as a steam road, the Suburban was electrified in the early 1900s, and heavy equipment was used. In 1920 lightweight cars were purchased, which remain in use. Both steam and juice line have been under control of the Pittsburgh Coal Co. since 1935, and have been run jointly to a certain degree.



Frank and Janice Donovan

* * *

MILLION-DOLLAR investment for PCC cars pulls Cleveland Transit Co. into place

ENGLISH commuters of 1860 rode tramway from Birkenhead to Woodside. Judging from the angle of the top hats, the driver spared his power

TOLL-HOUSE on old Jamaca private roadway spanned eastern city line tracks

OPEN-CAR TRAINS were run in Massachusetts on Nantasket Beach line of the New York, New Haven & Hartford, first steam road in U.S. to be electrified. First run from Pemberton House was made on June 28th, 1896

TROLLEYS once exploited the special service field. CENTER: Draped funeral coach on Everett Ry. bears both coffin and mourners to grave. Such carriers were not uncommon in past. TOP: British Columbian double-board Number 20 ready for jaunt to golf course. Painted sign on top blazons merits of "Duke's" tobacco, early start in ad posters. BOTTOM: Air-conditioned Victory Park Number 3 on 2-mile link between Put-in-Bay, O., and Victory Hotel on South Bass Island; photo from Joseph Galloway, Toledo, O.

with other progressive lines. ODT has given an okay for the purchase of 50 from the Pullman Standard Co. at a reputed cost of $1,100,000.

"These are the first new streetcars acquired by the city lines since 1928," writes John Rehor, 20931 Morewood Pkwy., Rocky River 16, O. "Its equipment now includes 1000 passenger trolleys, 475 buses, 29 trackless trolleys and several hundred work cars."

* * *

WHO REMEMBERS two almost forgotten lines of years ago: the Deep Lake-Everglades Co. in Florida and the Pinehurst Electric Ry. of North Carolina?

According to John I. Smith, 6619 Wayne Ave., Philadelphia 19, Pa., the Deep Lake-Everglades was a 20-mile interurban line on the Gulf coast of Florida, operated until the Atlantic Coast Line took control. It was purchased for use in constructing the ACL extension to Everglades, Fla. John would appreciate any data or pictures of their equipment.

The history of the Pinehurst Electric is the story of one of the earliest juice line abandonments. In 1905, the Pinehurst Electric ceased operations over the 7-mile track between Pinehurst and Southern Pines, N. C. The pike had been built in 1899 by James W. Tufts, a pioneer soda fountain manufacturer of the Gay Nineties from Boston, and owned three cars. Has anyone even a picture of this line?

* * *

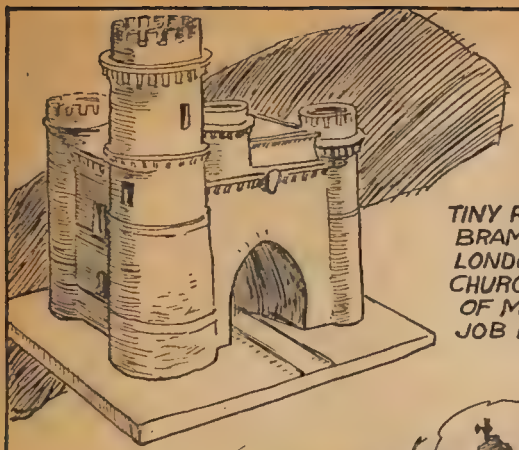
ANNUAL REPORT of the Cedar Rapids & Iowa City interurban road shows an increase of 100,856 passengers in 1944 over '43 records, with an $83,214 jump in revenue. These figures are the success story of a juice line that invested money in the most modern equipment back in 1939, when others were giving up their fight for existence.

Compared with 1935 figures, the report seems incredible. Only one additional round trip was scheduled, but frequently second sections were run to handle the traffic that has increased 1000 percent in the past ten years. "Crandic" today returns big dividends for the far-sighted investment of '39.

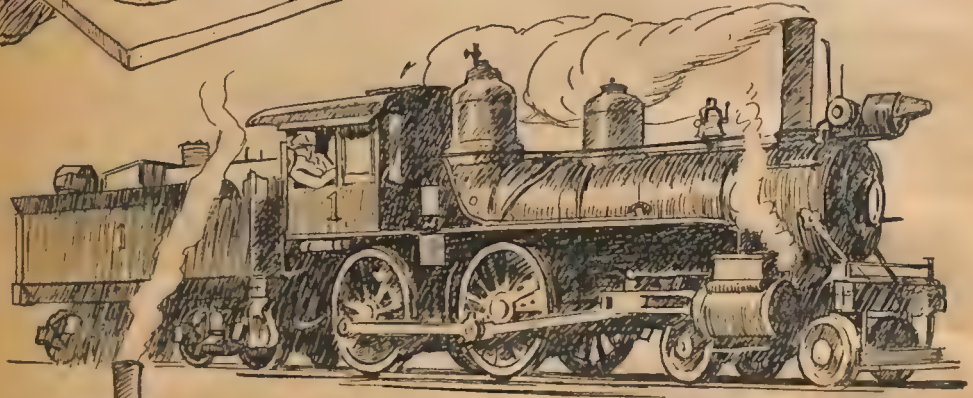
CONEY ISLAND curve where Lykens & Williams Valley Street Ry. crossed Pennsy tracks in scenic hills near Wiconisco, Pa.

ALONG THE IRON PIKE

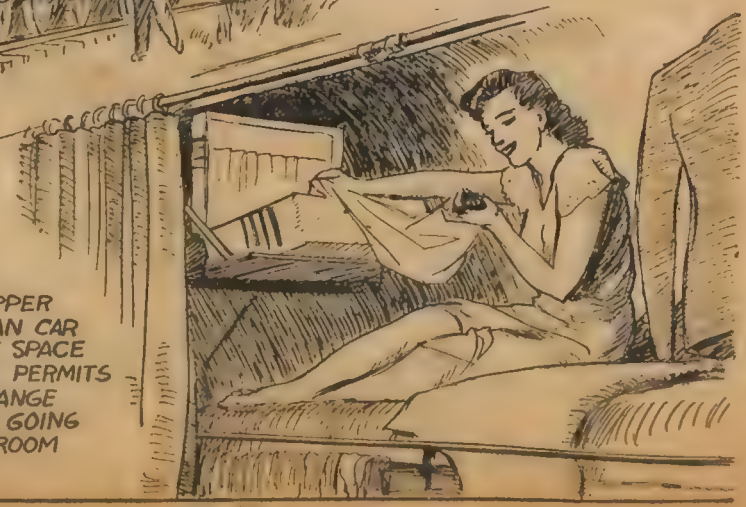
by JOE EASLEY



TINY REPLICA OF NORTHERN PORTAL OF BRAMHOPE TUNNEL, LONGEST TUNNEL ON LONDON & NORTH EASTERN RY., STANDS IN CHURCHYARD AT OTLEY, ENGLAND, IN MEMORY OF MEN WHO PERISHED ON CONSTRUCTION JOB LONG AGO (From C.L. Winey, secretary, Franklin Ry. Supply Co.)

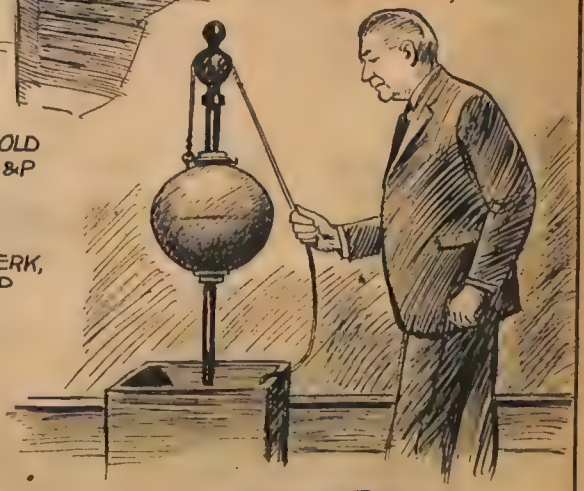


ONLY ENGINE OF STOCKTON TERMINAL & EASTERN, 19-MILE FREIGHT ROAD, BUILT 1867 BY R. NORRIS & SONS FOR CENTRAL PACIFIC, NOW SAID TO BE OLDEST LOCOMOTIVE OPERATING IN U.S. SHE WAS ORIGINALLY NAMED **KLAMATH**, THEN NUMBERED 31, 1193, 1215, 1488, AND NOW NO. 1 (From Dwight S. Took, Stockton, Calif.)



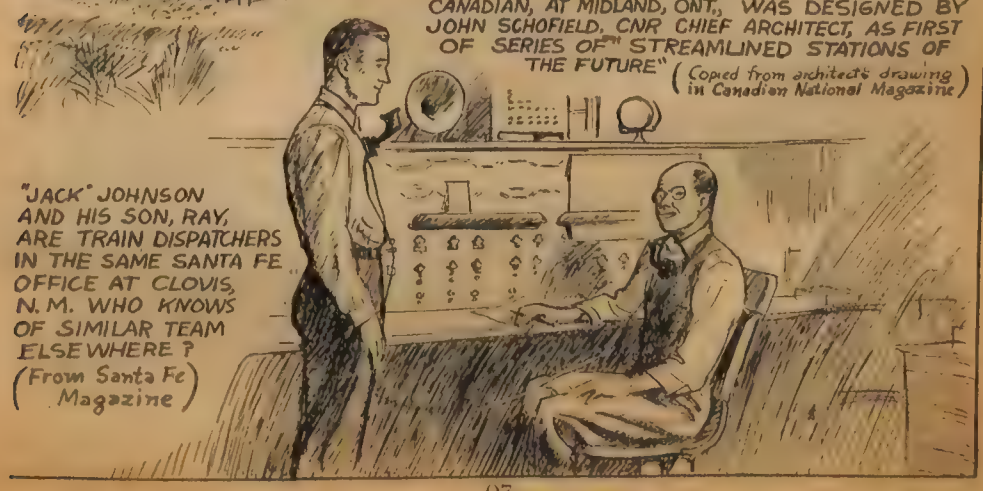
NEW RACK IN UPPER BERTH OF PULLMAN CAR PROVIDES STORAGE SPACE FOR SUITCASE AND PERMITS PASSENGER TO CHANGE ATTIRE WITHOUT GOING TO DRESSING ROOM

RED BALL SIGNAL (ARROW MARKS OLD LOCATION) REMOVED FROM CMStP&P CHICAGO RIVER DRAWBRIDGE AT BLOOMINGDALE AVE., CHICAGO, IS NOW MUSEUM PIECE. CLOSE-UP SHOWS FRED E. WEISE, CHIEF CLERK, ENGINEERING DEPT. BALL AT TOP OF ROD MEANT ALL CLEAR FOR APPROACHING TRAINS; HENCE THE TERM "HIGHBALL." WHEN BRIDGE OPENED, BALL SLID DOWN INTO BOX, OUT OF SIGHT (From Milwaukee Road)



UNIQUE DEPOT, DISTINCTIVELY CANADIAN, AT MIDLAND, ONT., WAS DESIGNED BY JOHN SCHOFIELD, CNR CHIEF ARCHITECT, AS FIRST OF SERIES OF "STREAMLINED STATIONS OF THE FUTURE" (Copied from architect's drawing in Canadian National Magazine)

"JACK" JOHNSON AND HIS SON, RAY, ARE TRAIN DISPATCHERS IN THE SAME SANTA FE OFFICE AT CLOVIS, N. M. WHO KNOWS OF SIMILAR TEAM ELSEWHERE ? (From Santa Fe Magazine)



On *the* Spot

FREDERICK G. FLETCHER, Norwood, N. Y., an old retired veteran of the key whose career began half a century ago on that part of the Central Vermont which is now in the Rutland system, re-lived his days as a lightning slinger while reading Harry Bedwell's two-part serial, "Desert Job" *(May, June '45)*.

"Any rail in the operating department," says Fred, "can tell from this yarn that Bedwell has been around, has pounded brass in the desolate areas where jackrabbits, rattlers, and sand fleas reign supreme. Through his popular character *Eddie Sand* the author realistically depicts the life of a railroad telegrapher. 'Desert Job' deserves a niche in the archives of American lore."

The following comes from H. C. White, retired railroad telegrapher, 132 N. Berkeley Ave., Pasadena 9, Calif.:

"Having been at desert jobs myself, I

67-98 — RAILROAD — E-957

appreciate Bedwell's story. However, I worked in the good old days and not in a wartime rush. I doubt very much if I'd care to go back into harness now from retirement, as *Eddie Sand* is doing it better than I could. Besides, it is cutting down his weight, with all that perspiration which is by no means entirely from the desert heat."

Mr. White also found "Drovers' Passes," by Watson B. Berry *(May issue)* much to his liking. Says he:

"I have worked in a cow and sheep country to where shipments were made, and many a pass was furnished some storekeeper or friend, cowboy, or sheep herder, just for the trip. While upper New York State and the wide-open spaces of the Western range were far from each other, it seems that the same kind of folks lived

WATER tank filled, WP work train, ditcher leaves Virgilia in Feather River Canyon

CAMELBACK PROFILE. Wide anthracite-burning Wootten firebox necessitated placement of cab at the center of the boiler with fireman's shelter at rear. Camelback law has put ban on the operation of such engines but a few roads continue to run them under wartime emergency extension

in both places when it came to getting free rides in old days before automobiles."

Charles Dulin

Another operator, Charles D. Dulin, 1720 New Jersey Ave., Kansas City, Kan., who worked five years on the Santa Fe and Union Pacific, regards "Desert Job" as the best rail-fiction story he has ever read. (Charlie is widely known as a railroad poet. See page 34.)

"I used to be an *Eddie Sand* myself," he recalls. "That story could not possibly have come from the mill of an outsider. You can see that Harry put some of his own life into that yarn and while reading it I was right in there pitching with *Eddie*. The author brings in details that set you smack-dab in that little shack. Reminds me of many times I panted through the ordeal of order-copying and delivering, like Eddie did, racing against time.

"That line, 'He felt that slight clutch at his stomach', brings back the night at Lang, Kan., when Santa Fe train 17 had her ears back for a meet with 18 at Emporia. Just as she showed up, the contrary Kansas wind blew out my semaphore light for the fourth time that trick. I hadn't time to relight it. Sparks flew as 17 ground to a stop. They flew again when the conductor came into my office, and a third time when I OS'd that train. The dispatcher put the night chief on, and he pumped me. It may have been fun to them, but I assumed full responsibility for the wind's action. I was a new op on a new job.

"A lot of other times afterward I also felt 'that slight clutch'. When I was sent to Granger, Wyo., to handle the UP and Oregon Short Line second trick I had the regular op stay with me the first night. I believe I understand how *Eddie* felt.

"Funny how trains can slip in on an

operator. Anybody but an op reading about them sliding in on *Eddie* would be likely to discredit the word-picture or think *Eddie* was dozing. One night at Gardner, Kan., I had nothing to do but clear the board for a passenger train from the east—nothing for an hour or so, anyway. I knew the train was due in ten minutes. I sat at the bay facing in that direction, but I'll be darned if she didn't grind to a stop under my red board! When I reported arrival and departure times the DS loved me to pieces.

"That old op's 'Woosel bird' deal reminds me of a lightning slinger by the name of Levasy whom I worked with in Oklahoma City. No matter what came up or how bad it looked, Levasy went into his pet chant: 'Washington at Valley Forge . . . 'Twas bitter cold but up spoke George, etc.'

" 'Desert Job' hits deep because it's about me, when I was younger. I've been through it *Eddie;* I know what you're up against. I even fought with that old mill at AY (Santa Fe yard office at Argentine, Kan.). The mill was okay, but with my hunt and peck system two keys frequently sprang up together and jammed. Even with a perfect machine it would have been hard enough for me to keep up with a fast relay op trying to make his average without mishaps.

"If 'Desert Job' has one flaw, here it is: I can't understand why *Eddie Sand* failed to play up to the beautiful, congenial and efficient young woman who relieved him each day at the lonely depot. To me that doesn't make sense."

* * *

ODDITY. Although the distance between Wheeling, W. Va., and Bellaire, O., is shown on Baltimore & Ohio timetables as 5.1 miles, you pay 45 cents to ride between the two points in a day coach, reports W. David Swaney, 37 15th St., Wellsburg, W. Va. That makes approximately 9 cents a mile. Since when have U.S. railroads been authorized to charge 9 cents a mile?

Well, let's see. Originally the fare was figured on a 2-cents-a-mile basis, 10 cents, to which was added a 25-cent bridge toll.

Total, 35 cents. Then on February 10, 1942, the Interstate Commerce Commission granted a 10 percent fare increase, making it 39 cents. Add 15 percent war tax and you have the grand total, 45 cents.

* * *

RAIL RABBIT. For those who fail to see the six-foot-two white rabbit in Broadway's Pulitzer prize play, *Harvey,* a smaller version can be viewed any night at six in the stockyards of East St. Louis, Ill. According to a New York Central fireman, Jerome S. Hamilton, 424A North 14th St., of that city, the bunny shows up regularly on a large pile of scrapped lumber near a certain track.

"Reading of a railcat in a recent issue," Jerome writes, "I thought you might be interested in the wild rabbit. Engineer Hicks and I ride over to the National Stockyards each evening to pick up livestock and fresh meat for a hot train in the Brooklyn yards. The cars are always set on the same track for us, and beside it lies the heap of discarded timber. As we come by, Peter is waiting there for Hicks to toss him some dinner. The runner began the feeding act last winter when snow covered the yard and he first saw the rabbit. Since then neither have missed a night."

* * *

TOWN RENAMED. E. R. Lash, Lone Pine, Calif., writes: "In my youth I worked as a mail clerk in Ohio and was obliged to be familiar with all postoffices in that state. So years later, in 1924, I was surprised to pass through an Ohio town named Willard, which I had never heard of before. Inquiring of the local postmaster, I learned it used to be called Chicago

From Canadian National Magazine

HOME ON THE RAILS. Canadian National cozy "model traveling freight office," caboose 77531, assigned to 7:30 a.m. transfer job between Mimico, Ont., and the Don, is freshly renovated and equipped with many conveniences. (Left to right) Nick Carter, car helper; Ray Henderson, conductor; J. B. Currah, superintendent, Toronto Terminals, and Tom Harrison, car helper

Photo by John P. Ahrens, 608 Warren St., Brooklyn, N. Y.

D&H HELPER 1604 is run backward to facilitate speedy return

Junction. The town had been renamed as a tribute to a grand old railroad man, the late Dan Willard, B&O president.

* * *

HERBERT MONROE'S article, "Whistling Hoggers," in our May issue, is still drawing many comments from readers. James E. McKee, Jr., Director of Public Relations, Frisco Lines, has this to say:

"Although, as Monroe states, the musical inclinations of engineers have been snuffed out, even today we find that some whistles sound better than others, as an item in the *St. Louis Post-Dispatch* attests."

The item deals with the reaction of Gov. Donnelly of Missouri to engine whistles. Donnelly, who used to be a Frisco attorney, moved last winter from Lebanan, Mo., to the executive mansion at Jefferson City. This mansion is atop a high bluff, beneath which is a Missouri Pacific yard. The air is constantly rent with the din of switching operations and the thunder of through trains.

"What bothers me most," says the Governor, "is the difference between MoP and Frisco locomotive whistles. From my home in Lebanon I could hear the Frisco whistles, and I have been used to them all my life. But these MoP whistles are different. I suppose I shall get used to them in time."

Pfc. Sam Appleby, U.S. Army, who supplied one of the photos for Monroe's article, comments: "Centralized traffic control may give some engineers a chance to have a little whistling fun. On CTC trackage it is unnecessary to whistle for meets or extra sections; therefore whistle signals are not as important as on other trackage and would not be mistaken as easily.

"While reading that feature I was riding a Seaboard express over CTC territory. As an opposing train roared toward us on the adjoining track the hogger gave us a whistle salute. Our engineer answered, and the two veterans of the main iron repeated the call twice more. Then the big Mountain type engine rushed by me and was gone. 'Very unnecessary,' brass hats might judge that quilling. Yet it's one of the few reminders we have left of personalized operation that comes under the head of 'romance of the rails.'"

We now hear from K. W. Ackerly, 141 F St., Copeland Park, Newport News, Va., who recalls a whistling hogger named Edmunds on the Chesapeake & Ohio: "I often heard him whistle such tunes as *The Oaken Bucket, Lead Kindly Light, Rock of Ages,* etc., while he was rolling the varnish through my home city. Later he worked in the yards here. On December 31st he would play the old year out and the new one in. One year the city

Photo from C. L. Winey, Secretary, Franklin Railway Supply Co.

CAIRN erected on summit of Mt. Washington, N. H., indicates place where Lizzie C. Bourne died in a snowstorm in 1855. Tracks of Mt. Washington cog railway passed the spot from 1872 until the line was abandoned a few years ago

banned unnecessary noise, but his admirers got permission from the city fathers for Edmunds to whistle his tunes."

* * *

TRACKSIDE GRAVE? Not at all. The Lizzie C. Bourne monument near the top of Mt. Washington in New Hampshire's White Mountains is not even a trackside cenotaph, although it used to be, during about 60 years of cog railway operation. Our story comes from Charles E. Fisher, president, Railway & Locomotive Historical Society, 20 Wilde Road, Waban 63, Mass.

On September 13th, 1855, three vacationists from Kennebunkport, Maine, set out from Glen House at the mountain's foot to climb the peak: George E. P. Bourne, his daughter, and his 23-year-old niece, Lizzie. The weather was mild, with brilliant sunshine, and by following a partly-built carriage road they expected to reach Summit House before sundown. Toward noon, however, black clouds suddenly darkened the sky and in mid-afternoon a furious snowstorm began to obliterate all landmarks on the trail. Soon they were stumbling along in the darkness, becoming more and more chilled and exhausted. Finally, despite Mr. Bourne's help, the girls were too weak to proceed further. Both lay down in the snow, where Lizzie died about 10 p.m.

The two survivors, dazed with grief, were found by a searching party. They had been very near their goal when they gave up; by pushing on a short distance they would have been safe in Summit House! Before taking the body home for burial they erected a pile of stones to mark the site of Lizzie's death.

In 1872 a cog railway was built without disturbing the humble cenotaph, which stood a few feet from the track. A few years ago the rails were torn up. Presumably the memorial, or what is left of it after 90 years of exposure to mountain storms, is still standing. Who can tell us?

* * *

MEMORIES of the winter of 1908 are recalled by John F. Roden, c/o Mrs. Lena Hilton, Fair Haven, N.Y. He was then working on the old Ho-Jack Line (the Rome, Watertown & Ogdensburg, now in the New York Central system). One morning as they were starting out from Rome, N.Y., snow mantled the ground; the weather was crisp and cold.

"We backed our train into a freight yard at Oswego," he writes, "near where an Adirondack Mountains guide named Gill lived with his family. Mr. Gill's dog, Spot, liked to ride in the engine cab with us. He'd sit on the little drop seat ahead of the seatbox of Fireman Pat Rogan. Pat

taught the animal to hold a corncob pipe in his mouth. It was comical to see the two of them, man and dog, sitting there, each with a corncob pipe.

"On this particular morning we took Spot with us, as usual, while we picked up cars from various manufacturing concerns. The weather continued sunshiny until about 2 p. m. Then a few snow flurries drifted down. As soon as the snowfall started, our four-legged railroader disappeared, much to our surprise, but we kept on with the job of making up our train.

"Without any warning, a fierce northwestern wind blew in from Lake Ontario. It was almost impossible for us to see signals in the swirling snowstorm. This slowed up our work. Not until about 5:30 did we get the train ready. Then we set out to the junction three miles away, where the Gill family lived and where stood a telegraph station at which we received orders before entering the main track. By this time the drifts had piled up so high that we had to do a regular snow-bucking job to get our train through.

"When we arrived at the junction we decided we could go no further without a helper engine; so our conductor, David Knight, barged into the operator's shanty to explain the problem to the yardmaster on the west side. He was told, in reply, there would be no helper engines available until 8:30 p.m. It was then about seven. The op went home immediately after our arrival. This left us alone. There was nothing else for us to do, so we climbed into the engine, pulled the storm curtain tight, and sat around telling yarns.

"That morning, as we learned later, Mrs. Gill had been fooled by the nice weather into taking a shopping trip with her small daughter. Of course, she had not expected a blizzard. The two of them had walked three-quarters of a mile to the trolley car and boarded it for the ride to the city.

"But getting back to our party in the engine cab: while we were entertaining each other and keeping as warm as we could, we suddenly heard loud and persistent barking. We thought Spot wanted us to take him into the cab. I got down to lift him up, but he would not let me do it. He ran away a few feet, still barking vociferously.

" 'Well,' I said, 'if you don't care to come up here where it's warm, you can stay there and bark your head off.'

"With that I climbed back into the engine and made myself comfortable again. The dog returned, barking louder than ever, a sharp persistent bark. It was still snowing and blowing; you could not see more than 10 or 15 feet ahead. Spot really howled. At length Conductor Knight said:

" 'Boys, there's something wrong. That dog wouldn't stay out there barking for fun on a terrible night like this. I'm going to find out what it is. Our helper won't get here before ten o'clock anyway.'

"So Dave started out and I followed. Yelping excitedly, Spot ran ahead of us, occasionally running back to see if we were trailing along. He led us up the road a half-mile. There we found Mrs. Gill and her daughter. The lady had fallen down from exhaustion and the child was too small to help her. Dave and I carried them to their home. We phoned for a doctor and stayed till he came. Mrs. Gill gave birth to a boy.

"That boy is now 36. His mother is still living. Both owe their lives to Spot. The dog died long ago. I hope he has gone to some railway beyond the sunset. Only two of my old crew are left. I often visualize that gang in the engine cab, with Spot on his accustomed seat, and he and the fireman grinning happily, each with a corncob pipe in his mouth."

* * *

RECOLLECTIONS of familiar names and places surged through the brain of Marshall B. Craig as he read the item about the Burlington, Cedar Rapids & Northern (now part of the Rock Island) in our May issue. Marshall is supervisor of training in the Engineering Dept. of the Key System and lives at 1106 Broadway, Oakland, Calif. His father, George M.

"ABNER, kiss Grandpa, but don't pull his whiskers!"

Craig, was an Iowa State senator, chairman of the Committee on Railroads, and served as local attorney for the BCR&N and the Chicago Great Western and its predecessor, the Maple Leaf Route.

"Anyone familiar with BCR&N history," says Marshall, "could tell you about the disastrous wreck at Washburn, Iowa, in June, 1899. A freshet washed several hundred yards of ballast from under the track. When the northbound midnight passenger train hit this area, the engine left the rails, broke loose from the coaches, ran across the right-of-way into a cornfield, buried her nose in the mud, and turned over on her side. The engineer and fireman escaped without serious injury; but as the cars piled up and the smoker was telescoped, 9 or 10 persons were killed.

"A gentleman from Waterloo, 7 miles to the north, had an arm caught in the wreckage. Rising water threatened to drown him. The only way to save his life was by amputating his arm, and this was done. The injured man then walked across the field to a farmhouse, where he was given first aid. He recovered and for many years was employed as a BCR&N railway postal clerk."

* * *

PICKUP any MoP ticket from a sorting table in the office of auditor of passenger receipts and hand it to Clerk W. R. Campbell. In a minute or two he'll tell you the name of the conductor or conductors who handled it.

"Simple," says Mr. Campbell. "It's just a matter of comparing the design of the hole punched into the ticket with our record book of punches issued to conductors. Each punch has a die of peculiar size and shape which perforates the ticket as no other equipment on the division will do. It is really the conductor's official signature. With this he signs tickets, trip reports, etc., with a mark that cannot be easily forged or counterfeited."

MoP Lines have used some 1500 different-shaped dies for these punches. As

PUZZLE? Nope. Just 35 conductors' punch signatures from MoP's 1500 different-shaped dies, used for quick identification and guarantee against forgery

time drifts by, new ones are issued to replace those worn out or accidentally lost. There may be some duplication of design in dies on the western and southern districts, but such duplication is scrupulously avoided on any two adjoining divisions.

The need for identifying the conductor who handled a ticket usually concerns the matter of refunds on partially used tickets, although frequently in these days of heavy passenger traffic, and the rush of other details, a skipper may fail to write his name on his reports, but the tickets accompanying that report will bear his punch mark, and make quick identification possible.

An unusual example of the use of such punches comes from 80-year-old Benjamin C. Elder, 1027 Stevens St., Taft, Calif.

"In 1889 and 1890," he writes, "I was district wire chief for the Northern Pacific at Staples, Minn., then the junction point of the Brainerd-Lakes, the St. Paul, and the Jamestown, N.D, divisions. All freight runs terminated there, as did all passenger runs except transcontinental ones. When I left Staples I was given what was known as a 'conductors' letter,' recommending me to other conductors everywhere and requesting that they extend favors to me enroute to wherever I happened to travel. This was signed in ink by 52 conductors from the divi-

REBUILT Baltimore & Annapolis RR. bridge over Severn River takes B&O trains into Annapolis

sions mentioned. Each man put his conductor's punch after his name to assure its genuineness."

* * *

ALTHOUGH the Canadian Pacific owns a fleet of ocean-going liners and although many other roads have water craft of one kind or another, the Canadian National claims to be the only railroad actively engaged in shipbuilding. The Prince Rupert Drydock & Shipyard, a CNR property, has constructed four minesweepers and eleven 10,000-ton freighters. Its floating drydock, which weighs 20,000 tons, has handled 815 ships and repaired 2,280 floating craft of all sizes.

* * *

RECENT issues of *Railroad Magazine* have been giving too much space to "the dear, old, dead-and-gone days," opines a young Army man, Pfc. Wm. H. Jones, 1015 S. Summit Ave., Sioux Falls, S. D., who suggests: "How about more on what the roads are doing today and planning to do, rather than who worked the biggest racket of 1904?"

* * *

SKETCH of the Arcade & Attica *(May Lantern dept.)* brought back memories of his boyhood in Rushford, N.Y., to Rev. A. J. Bailey, Genesee, Pa.

"We lived there when the south end of the road between Sandusky and Cuba was thrown up," he recalls, "and I often went down to the Sandusky depot with my father. After the trackage had been abandoned, farmers put temporary fences across the right-of-way. One Hallowe'en my brother and a friend pushed an old car truck up the rails to Hardy's Corners, carefully opening each gate and closing it behind them when they had passed through. At the top of the hill they turned and sent the truck down the grade under its own power. This time there was no need for anyone to unlock the gates—but the two spent the next holiday replacing the damaged fences.

"Some years later," he continues, "my father moved to a farm between Arcade and Sandusky, which was crossed by the

FUEL FOR BOMBING PLANES, tanks, and jeeps, such as New York Central engine 2124 is wheeling, is now largely being routed to the Pacific Coast for use in polishing off the Japs

Attica & Freedom. The line ran only as far as Sandusky, Freedom on the time card identical with the Tonawanda Valley & Cuba depot there. When standard-gage took over, we all cut school to ride free on the first train over this branch to the junction of the Western New York & Pennsylvania, which the Pennsy leased in 1901. Sam Lyke rode the last train over the narrow-gage, before becoming Super.

"I believe Frank Colby took the engine over the widened rails. At any rate, Frank was running the light engine that went through the trestle on the Wyman farm in 1902. His fireman, Miles Robinson, was killed in the wreck.

"The Goodyear Lumber Co. rebuilt tracks along the narrow-gage bed in 1901, planning to stretch the road through the Pennsylvania woods. However, the project was dropped and the rails were torn up a year later. A new route built over an improved grade between Sandusky and Arcade was abandoned in 1917."

* * *

Big Four Route

CROSSINGS. "When I was young," relates Morris Donovan, 3735 Drake Ave., Cincinnati 9, O., "putting in rail crossings meant trouble. Intersections were made over the wreckage of property, if not lives, of the trainmen involved. I remember clearly the time the Big Four's Michigan Division tried to cut over the Midland at Anderson, Ind. The frogs were put down one night, but were hauled up next morning when the Midland sent out a tough section crew and engine to tear them out.

"Big Four Roadmaster Nixon stood in the crossing while the wrecking chain was slung round it and coupled on to the engine. The Midland conductor signaled Billy Giger to jerk it. As Nixon saw the slack tighten on the chain, he jumped clear over the right-of-way. The crossing traveled 25 feet to where it lay on Big Four property.

"In July, 1894, the Pennsy tried similar tactics for their Belt Line around Anderson. When the Midland called my father as runner, I fired the engine while Billy Giger, Elmer Smith and Superintendent Moore rode with us. Shoving an empty boxcar ahead, we moved down the track to the junction.

"Pennsy section hands had taken out a rail 400 feet from the place of the joining. They had a flagman out, but my father ignored him. Hitting the spot where the rail had been removed, our engine and car headed for the woods, although our idea had been to pile them into the crossing. As the tank and engine closed up, my jacket was caught and torn off.

"I saw a fire between the trees and ran toward it. Nearby stood a barrel of whisky, with tin cups hanging from the top where its head had been knocked open. Three or four bushel baskets of sandwiches were on the ground alongside. While I had a good time there, the crews were searching for me. My father had threatened to kill the Pennsy roadmaster if I was injured.

"Most of these men have been dead many years," Morris concludes, "but I recall this distinctly, though I was just sixteen. This was my start of a career of more than fifty years on the rails."

* * *

CORRECTION. L&N train mentioned in June *Less Than Carload Lots* was not *The Azalean* but a *"jerkwater"* train (Engr. "Slim" Dailey, Condr. "Plez" Barnett), reports Thomas E. Patterson, 240 4th St. N. W., Pulaski, Va. Many readers noticed error in caption under M&U engine photo in June issue (page 38): 22,700 "pounds" was misprinted "tons".

* * *

WANTED. Signalmen, assistant signalmen and helpers are needed at once in Minnesota, Nebraska, Kansas, Oklahoma, Texas. Details obtainable from C. R. Swenson, signal engineer, Rock Island Lines, LaSalle St. Station, Chicago 5, Ill.

* * *

ADDING to the list of Negroes employed in train service on non-Southern roads, mentioned in this department from time to time, Otis Lambert, 2548 Naomi Ave., Arcadia, Calif., recalls that many years ago when he was employed as a callboy he knew at least three colored

Photo by Geo. Lohr, Washington, D. C., from The Railway Post Office magazine

SORTING MAIL on Washington-Atlanta run, Southern Ry.

brakemen on runs between Cedar Rapids and Iowa Falls, Iowa. One was Perkins; he does not remember the other names.

* * *

TOO MANY DRIVERS are shown in artist's drawing of Northern Pacific switcher 917, changed from coal-burner to wood-burner (May '45, *Less Than Carload Lots)*, reports Albert Farrow, 820 B St., S.E., Auburn, Wash., who took a photo of this 0-6-0 type in 1938. Albert says she was working around the mill at Shelton, Wash., before the present war.

We asked if any reader knew of any

Photo by John A. Rehor

ABANDONED in 1934, the East Berea line of the Berea Central, a famous Ohio quarry road, was dismantled in 1944

coal-burner other than the NP 916 and 917 converted to wood.

"Yes," replies John R. Edmonds, locomotive engineer, Florida East Coast, 304 S.W. 34th Ave., Miami 35, Fla., sending us a photograph of a little old girl, No. 7, now owned by Naranga Rock Co., Naranga, Fla., 25 miles south of Miami, on the FEC. John explains:

"She was built by Schenectady for the FEC in 1898, two years after the road had completed its extension from West Palm Beach to Miami. There were two of these little 4-4-0 types, Nos. 6 and 7, built exactly alike but in a class by themselves. They had 17x24-inch cylinders, 63-inch driving wheels, 160 pounds to the square inch boiler pressure, and 14,972 pounds tractive force. Each weighed 93,000 pounds in working order and came to the FEC equipped to burn soft coal."

When Edmonds began working for the FEC as engineman in 1912, the 6 and 7 were still burning coal, but about 1916 were rebuilt as oil-burners. Subsequently the 7 was sold to a sawmill in southern Florida, where she was converted to burn wood. After the sawmill had cut all its standing timber, it sold the engine to its present owner, Naranga Rock Co., where she again became a coal-burner, although her old wood-burning stack was not removed. She is the only engine we know of which has burned coal, oil, wood and then coal again.

The old gal, now retired, stands beside U.S. Highway No. 1 that leads to Key West. "Captain Tom," present owner of Naranga Rock Pit, uses one side of her tender to advertise his products. He has painted on it these words, "First Engine to Enter Key West." Veteran FEC engineers deny this claim, insisting that a FEC Atlantic type was first, reaching Key West on January 21, 1912.

Old prints on pages 106, 112, 113 from C. L. Winey

HORSE-CARS. We are assembling material for an illustrated article on the history of North American horse-cars. This refers only to horse-drawn streetcars that ran on rails in U.S., Canada, or Mexico. We'd like to hear from old-timers who actually drove such cars or were closely associated with them.

Most of all we need horse-car anecdotes,

OPEN-PLATFORM string of varnish on the Rock Island 60 years ago

Photo from P. B. Oakley, Geneva, N. Y.

"HAY-BURNER" on Delancey Street in downtown New York

humorous or otherwise, and first-hand recollections. Photos, too, we could use from veterans who are kind enough to loan us keepsakes from their old albums for publications. It goes without saying that we would take good care of such pictures and return them with reasonable promptness. Horse-car material may be sent to Freeman H. Hubbard, research editor, *Railroad Magazine,* 205 E. 42nd St., New York 17, N. Y. Photos should be protected by cardboard, preferably corrugated board.

* * *

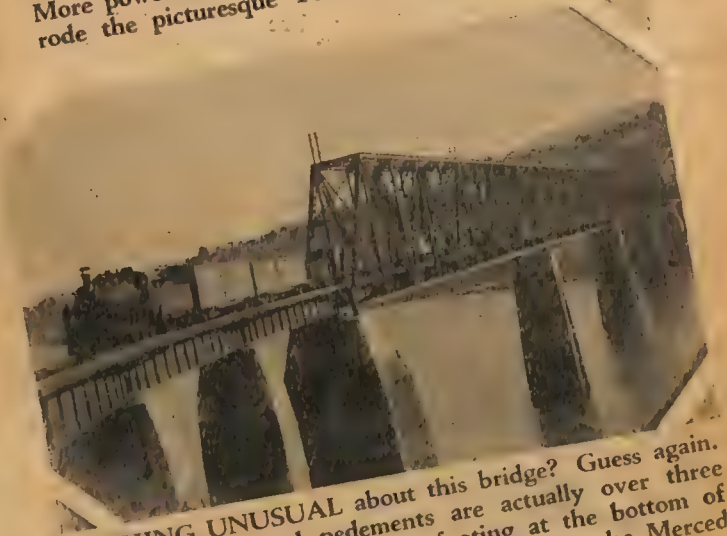
LAST STOP is the Reader's Choice coupon *(page 145),* which guides your editorial crew in selecting material for future issues of *Railroad Magazine.*

Some rails and fans use the coupon. Others prefer not to clip the magazine; they send us home-made coupons or write their choice on postcards or letters. Regardless of how the votes are sent in, all count the same. Results of balloting on the June issue show the following titles listed in order of popularity:

1. True Tales of the Rails
2. Desert Job, *Bedwell*
3. Forney's Little Giants, *Lucas*
4. Light of the Lantern
5. Electric Lines, *Maguire*
6. 110 Miles in 12 Hours, *Henry*
7. Runaway Hog, *Waters*
8. On the Spot
9. Train Handling, *Booth*
10. Locomotive of the Month
11. Railroad Camera Club
12. Along the Iron Pike, *Easley*

Most popular June photos: On pages 118, 122-123, 38, 125.

YOU CAN COUNT on the whorl of your left thumb the number of steam fan trips engineered since Pearl Harbor. More power then to these twenty-eight Californians who rode the picturesque Yosemite Valley Railroad last Fall



NOTHING UNUSUAL about this bridge? Guess again. Its nearly-submerged pedements are actually over three hundred feet high—have their footing at the bottom of *Exchequer* reservoir formed by dam across the Merced

Photos from Gerald M. Best

115-139 .. RAILROAD .. 2-957

WITH ABANDONMENT THREATENING the picturesque Yosemite Valley, railfans made another excursion to Portal this May

URGENCY OF WARTIME TRAFFIC prevented operation of a special train. Two passenger cars, one of them reputed to have come from the Lehigh Valley many years ago were regular mixed train equipment

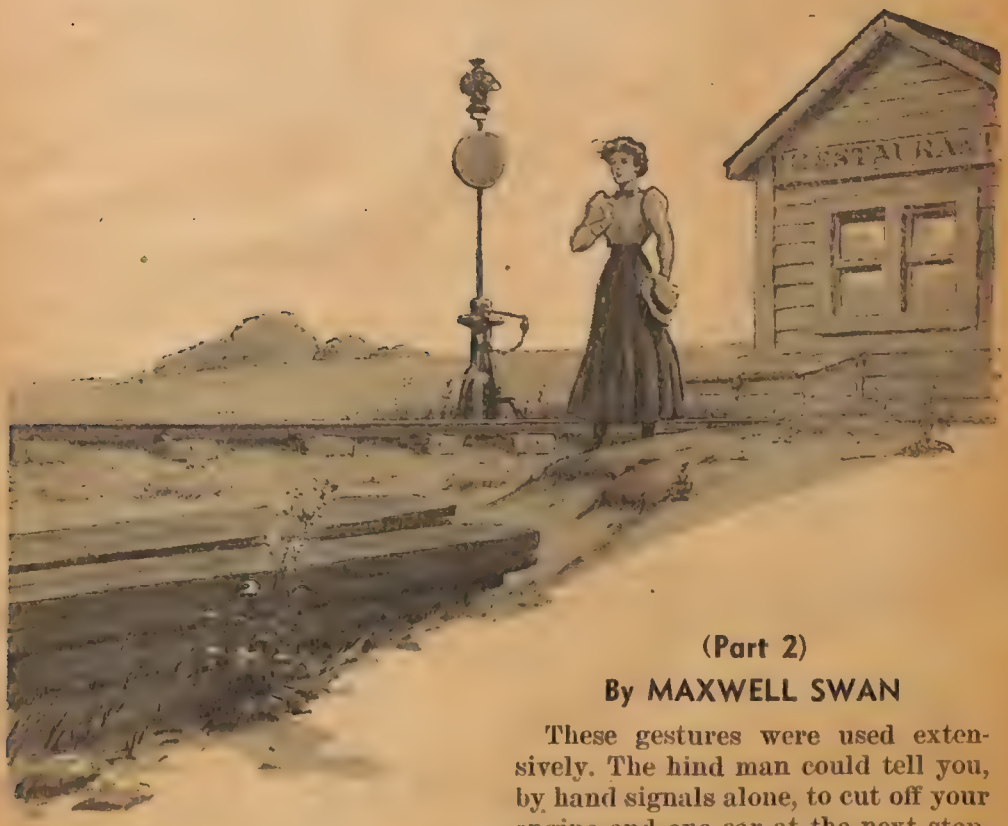
Wartime Fan Excursion

Wanderlust

MY BEST PAL quit me cold on Beverly Hill. That was thirty-five years ago. We were both boomers—I was nineteen and the Kid maybe twenty-eight or thirty—and we thought we had the world by the tail. I don't recall the Kid's name after all these years, but I remember him as a handsome little fellow, always well dressed and invariably sporting a sombrero. There was a ruthless quality about him. Hard and tough he was, yet with a polished shrewdness that set him off from the crowd. And close-mouthed as the devil. We made a pretty good team.

Yes, there was a girl in the picture. That's what caused us to split up, but not because of what you are probably thinking. I'll tell you about her in a minute. First let's get the Kid straight. Outside of Jack Carroll, foreman of a switching crew at Betteravia, Calif., he was the best car-hand I ever worked with. In 1910 we were braking together on the then new extension of the Chicago, Milwaukee & St. Paul out of Malden, Wash., often shuttling between Othello and Cle-Elum. He handled

My Mind Often Goes Back to the Rose of Cle-Elum, to Brown Eyes at Ellensburg, and to Many Others I Knew in the Reckless Boomer Days of My Youth



(Part 2)

By MAXWELL SWAN

the rear end while I rode the engine.

We had to make up our own trains out there, without the aid of a yard goat—and a long, tiresome job it was, usually taking about three hours—before we could start a run. After a time, the Kid got so far ahead of me in switching moves that I gave up trying to follow and had to work from his hand signals. In those days when rails used a wide repertoire of hand signals, the Kid had as complete a set as any I have known.

These gestures were used extensively. The hind man could tell you, by hand signals alone, to cut off your engine and one car at the next stop, spot them on the house track, pick up two cars on the stock track, make a flying switch of them onto the train, and then re-spot the stock track to clear a public crossing, give the engine water, and finally, eat a meal. This system of issuing instructions may seem incredible to all but old-timers, and yet it was common practice, especially among boomers, in the period of which I write.

You had to be good to give such signals and just as good to receive and understand them. They were

used all over the United States and Canada. However, there were sectional differences. For instance, the lads in the Midwest, as I remember it, signaled for a drop by pumping their elbows in and out, while Far Westerners favored the alternate chopping of the air with the palms held vertically almost rubbing each other.

The hay-makers, or cornfield sailors, as they were often called—that is, the men on the prairie lands—touched their back with one hand when they wanted a hog to back in. The boomer, more chary of waste motion, usually touched the back of his hand for the same operation.

Out of the dim past these signals come back to me as clear as the alphabet I learned in school. They were so ingrained that they became second nature. A clenched fist with thumb sticking up told the engineer that you wanted a little slack, so you could pull the pin. Two hands held that way meant to go "on the spot" (rest or relax). Two clenched fists with thumbs turned down meant "couple up your hose and cut in your air."

One clenched fist in the air stood for Track 1; two indicated Track 2; two clenched fists in the air, one rising, Track 3; palm out with thumb masked by other hand, Track 4; palm out, Track 5; palm out, turning into a clenched fist and thumb rising, Track 6; and so on. When you had more than ten tracks it was easier to do the job yourself than to go through the motions. The prize gesture was two thumbs at your ears and your fingers weaving in the air. That meant a stock car or stock track.

SO THERE I WAS, following the kid around by a lot of signals. That guy was so clever that even the hoggers would watch his actions with interest. It was like a game of chess. He would get you tangled up with what seemed to be unorthodox technique until you might think he'd never get out of the jam; then he'd make a surprise move or two and the whole thing would shape up just as he had planned.

One day our train had rolled eastward out of Cle-Elum enroute to the long steep grade of Beverly Hill and the town of Othello, and we stopped at Ellensburg to put on the feed-bag. For some reason, maybe a hunch, the Kid didn't go into the beanery with the rest of us but stayed on the caboose. I slid into a seat and studied the menu. Presently the waitress came up. She was small but well developed and quite pretty. The kind of woman you never forget. While she took my order she inquired if I were on that train; and when I answered yes, she asked if I knew the Kid, mentioning his name.

"Sure," I told her. "He's on the same crew with me." But I was not prepared for what happened next.

The gal said calmly, "I'm his wife."

She looked straight at me as she spoke. Well, you could have bowled me over with an ostrich plume. Why any man in his right mind would deliberately pass up a choice specimen like that was more than I could figure out. However, that was his business, not mine. I chinned with the beanery queen a few minutes. Then the rest of the crew finished eating and walked out, leaving us two alone.

I knew our train was on short time for the next meet. Soon I heard the engine whistle off, which informed me that the Kid had opened the gate. I had to hustle. The girl took off her apron to follow me.

When I reached the switch, the

rear brakeman was nowhere to be seen, so I stayed there to close it. Just then the dame rushed up breathlessly and asked where he was.

"Up ahead." I pointed.

Her brown eyes filled with tears, but I was too busy to console her. Throwing the switch behind the caboose wheels, I ran after the train, caught it, and swung a highball.

Inside the crummy I found the Kid sitting on the cushions, and I said:

"Just saw your wife."

His answer was quick and sharp. "You didn't tell her where I was, did you?"

"Why, sure I did," I replied.

His tone nettled me. I resented the fact that Brown Eyes was throwing herself away on a guy like that.

"You never told me your private affairs," I added. "I thought you'd be glad to meet her."

"Glad, hell! That little bitch has been trailing me from Jerusalem to Jericho. Can't shake her. No sooner do I get a new job than she bobs up again. I'm fed up on it."

His mood was sour, so I dropped the subject. But as I climbed into the cupola to watch the scenery drift by I could not help wondering how many a man would give everything he owned to be in the Kid's shoes that day and be followed by an attractive gal breaking her heart over him. It beats me why some skirts are like that. Treat 'em rotten and they're still crazy about you.

WHEN we stopped at Boylston I walked along beside the train noting the non-air cars, looking for brake-beams, airhoses, and the like. That was always a solemn occasion up there on the summit. It reminded

Try Thin Gillette and you'll put in
That for tough beard and tender skin
This thrifty blade sure turns the trick—
Gives easy, slick shaves—double quick!
New kind of edges on steel hard enough to cut glass
Gillette
BLADES
4 for 10¢
Produced By The Maker Of The Famous Gillette Blue Blade

you of a fighter girding himself for the fray.

Reaching the head end, I reported to the hogger what I had seen. Then I started back over the train, turning up the pops, expecting to meet the Kid halfway from the rear. Since he did not appear, I continued on his half. Then I glanced around and saw the Kid in a heated argument with the conductor on the station platform. When I got there the skipper's face was dead white and I knew he was mad. He turned to me.

"This fellow won't take the train down without a swing man. That ties us up tight, but he won't have any more job than a jackrabbit when I get in."

A swing man, as you know, is an extra brakeman who rides the tops going down, ready to help the regular crew to set brakes if the train shows signs of running away. Each man in the train crew carries a hickory club, often called the staff of ignorance. When they hear the engine whistle for help they club the brake-wheels, then they meet and double up. Two husky lads can slide the wheels on any freight car if the brakes are in good order.

Although no railroad was ever insane enough to try it, so far as I know, I would have been willing at any time to be part of a crew volunteering to take a freight train down hill by hand-brakes minus an engine, especially with the breed of men we had about thirty years ago.

Getting back to the Kid, I couldn't savvy his lingo. I don't recall that we'd ever had a swing man on that hill. He and I had shepherded them down a number of times without such help. The Kid was well within his rights, of course. Even in those days I think the Brotherhood rules required a swing man there. But his sudden attitude puzzled and irritated me.

FROM my conversation with the Kid's wife I gathered she was blue but hadn't lost hope

The station agent bawled out of the window: "Dispatcher says that if you don't take 'em down you're fired and you should deadhead in for your money."

At that the Kid chuckled. "Give me a pass to get on in," he yelled back, "and tell the slob to have my pay ready."

We lay there until the next freight came along. Then we took a man off her. The passenger train

RIP TRACK RENDEZVOUS. Low-wheeled 2218 clicked off the rail lengths when the old "St. Paul" had less than fifteen hundred miles of line

pulled in and the Kid climbed aboard. He waved at me, winked, and grinned. I knew what that meant. He was giving Brown Eyes the runaround again.

I couldn't help feeling sorry for the girl. That saucy little number had a lot to offer, and the Kid was just a damn fool not to see it. I met her once more about a week later. She was still slinging hash. We got talking together over a plate of ham and beans. I gathered from the conversation that she felt blue but hadn't lost hope.

"I'm saving my wages so's to get enough money to follow him again," she confided. "I'll find him. . . ."

Yes, sir, Brown Eyes was a one-man woman. I regretted then that I had not seen her before she met the Kid. I still wonder whether or not she finally overtook her slippery brakeman. Maybe some old-timer on the Milwaukee Road can supply the missing details. My address is 1433 South Grove Street, Berwyn, Illinois.

THERE WERE plenty of tough spots on the old St. Paul. Everything was new then, both men and railroad. They hadn't had time to get adjusted to each other. I remember a ruckus that happened on the division between Cle-Elum and Othello, not far from Ellensburg. I caught a work train with a conductor named Noble, a man from the old main line. The other shack was a French-Canadian whose name has slipped my mind. We were assigned to some fills, with flatcars and section men.

As railroaders know, a work train goes out and comes back in time to clear all timecard trains. It is given protection by the dispatcher. Extras are warned of its presence between certain stations. In addition, the skipper will leave a flagman at his home location, where his caboose is, to safeguard his return, and upon reaching the fill he will throw out a flag ahead to protect his front end.

Conductor Noble had only a short time to clear a passenger train, h

as there was a gang of idle laborers he decided to go out anyhow. He left me at the station. Before pulling out, he told me to hold everything.

"Everything?" I purposely repeated. This would mean even a president's special. He nodded.

"Okay," I said.

Usually a flag would warn that the work train was ahead, letting the flagged train go ahead under control. When another train came along the work train would ease into a siding near the job, but on this day Noble obviously intended to do a little work and come in for lunch.

I planted two torpedoes on the rails; then I sat down near the depot. After a while I began to feel uneasy. The passenger would soon be due but there was no work-train smoke on the horizon. So I ambled down the track, for, although the passenger was scheduled to stop, I was to flag it as though it weren't.

At length I placed another torpedo and then backed away, for an exploding gun can damage your eyes if you are near it. After that I flagged the passenger. The hoghead whistled an acknowledgment and drifted by me to the station. I wasn't worried. He was tied down by my signal until I arrived there.

When I got back to the depot, he was standing on the ground talking with his conductor, a chocolate soldier with a mustache like a villain in old-time melodrama. The conductor demanded:

"What are you holding us up for?"

"For Noble and the work train," I told him.

"That guy had better get here pretty soon," the O.R.C. growled. "I don't feel like being sewed up for any h-damned work train."

A long hour passed, and two more trains piled up behind the passenger, their crews stewing and fussing. Presently the mustache and the passenger engineer came up to me again.

"Sure you're calling them right?" the con inquired. "Looks like Noble is in the clear for us somewhere. He probably told you to hold all but us."

"Like hell he did," I retorted.

"Don't be a dope! If something happened to him, the dispatcher would know by this time. You'll have us tied up for a year."

"Can't help that, my friend. The only way you'll get that flag down is by bringing Noble himself back here to tell me what to do."

"This means your job," the mustache threatened. "If you're wise you'll take it down and let us go. Come on, Charley, let's get the hell outa here," he said to the engineer. "This scissor-bill doesn't know what time it is."

Leisurely I walked over to the track, put a torpedo down, and stuck my red flag into the ballast between the rails.

"There she is, Joe." That wasn't his name, but I was getting hot, and calling him "Joe" was a pleasant way to insult him. "You can ride over this rag but I'll never take it down. If you're so anxious to go, why don't you put a flag ahead of you and follow him out? Only be sure that he is plenty far ahead of you, 'cause Noble will be coming in pretty fast."

THE VILLAIN rejected both suggestions. He passed the time by making nasty cracks about me to the engineer. Eventually they were joined by the operator, who barged out of the office with a malicious glint in his eyes and croaked:

"The dispatcher is tearing his hair. He says that if you're wrong you

might as well come in for your time."

This seemed to make it unanimous, and I became uncomfortable. Here was a gang of old heads trying to break me down. I almost began to doubt that I had understood Noble right. Their logic was that if anything had happened to my conductor he would have gotten to a line phone somehow.

Of course, Noble should not have put me in this spot. Written orders would have forestalled the possibility of a gang trying to browbeat a poor brakeman who'd been only a few months on the pike. Just when I was really getting worried, someone cried:

"He's coming back!"

Sure enough, a black smudge had showed up behind a distant ridge, and the way it moved left no doubt that a train was thundering in. A hush fell over the crowd. Maybe the true significance of what might have happened burst over them. I believe that up to that moment everyone of them had thought I missed the order and was as good as fired.

I glanced at the moustache. That face was a greenish shade and he avoided my eye. The engineer slunk off to his cab. Pretty soon a string of flats came wheeling along, pushed by our engine. I lined up the passing track to let them in. Noble dropped off the first car, his face creased by anxiety, for he knew he had gummed up things. The passenger conductor, to cover his confusion, engaged in acrimonious dispute with Noble, who, being on the defensive, sought to justify the delay.

It seems that just as the work train was coming in, several flats jumped the track and our crew had a swell time getting them on again, as the cars were partly down the fill. If Conductor Noble had taken his caboose along, he could have thrown his line pole over the telegraph wires and called the dispatcher. There was no near wayside telephone he could have used. He was protected at both ends—he was on the passenger's time on the east, while I was on the west—so he devoted his time to rerailing the cars.

Boomerlike, I butted in to tell him how the hooligans had tried to break through me. I wanted to see a little fireworks and be in on the fun myself. It wasn't every day that a punk could dress down a big-shot passenger conductor. Noble heard me through but said nothing. I guess he was in enough trouble, so I let it ride.

Even so, I think that was the only decent thing I ever did for Noble. A short time afterward I tried to couple

a flatcar with the engine on a grade and messed up the job. As trainmen know, the Janney coupler on an engine is usually sure-fire, as it is well worked in; so I let the hog roll against the flat without chocking her. A home guard wouldn't have done that trick, but most boomers would have.

It missed, one chance in a thousand, and knocked the car along so that she started down the grade. I chased her with the engine, expecting to catch her on the next coupling. Luck was against me, however. The stunt failed again and the car got another boost.

What I should have done in the first place was to chock up the car; then, when I missed the first time, I should have chased the car on foot, and set the hand-brake. The situation was bad—we were almost on the passenger's time—so I signaled the throttle jerker to chase her and try again; but he refused with a toot of his whistle. He'd had enough; he wasn't going to drive a flatcar into the passenger train; and I don't blame him.

There was a little gully at the bottom, and he figured that the car might not get over the following rise; so we paced her behind, keeping an eye out for the passenger. She went through the dip and ran up the opposite hill, slowed down, almost topped it, halted, then started to roll back to us. The engineer let her come with a bang; I unloaded just before they hit, and she coupled as nice as pie. I stayed there to protect his return to the siding, but when he got in to clear I let the passenger go by.

That finished me with Conductor Noble. I don't remember whether or not he turned me in. Maybe I was ashamed and I caught another caboose. I recall having wanted to quit, for I had lost face with that gang, but I had stayed on because they were short of help. Anyway, that unpleasant incident marked the beginning of the end. While you're riding high, the approval of your fellow men is music to your ears, and pride in craftsmanship keeps you up, but once you slip you start thinking of new fields.

WHENEVER we tied up at Cle-Elum we found several places to go. One was a roller-skating rink. There were also saloons, a little, one-horse movie theater, Saturday night dances, and other spots not quite so reputable.

Cle-Elum was a coal-mining town as well as a rail center, but was not homogenous. The men of the St. Paul road in 1910 were mostly footloose wanderers with no social ties worth mentioning. Northern Pacific fellows rarely mixed with them. The other major element in town, the miners, were a tough, clannish bunch who had little in common wih railroaders. So you see the St. Paul boys were pretty much on the outside looking in on recreation facilities at Cle-Elum.

I often patronized the roller-skating rink. Most of the miners and rails kept away from it because they were too heavy on their feet, but I didn't do so badly. One girl caught my fancy there. She was a striking brunette who liked to wear vivid colors, like a scarlet tanager, and looked well in them. I used to think of her as the Rose of Cle-Elum.

It was not easy to make her acquaintance. Rose was almost invariably chaperoned by an older woman. After some maneuvering I did manage to meet her. Rose had dignity and

culture. She was my first real experience with a thinking woman who was also beautiful. When I stepped out with her I realized I was over my depth. Somehow I didn't belong. She went to Lover's Lane with me, but I got bogged down before her clear eyes and clear thinking.

I don't know where she is today. I am sure that whoever married the Rose of Cle-Elum never had cause to be ashamed of her. My memory often goes back to that girl; and to Brown Eyes, at Ellensburg; and to many others I knew in the glad, free, careless, boomer days of my youth.

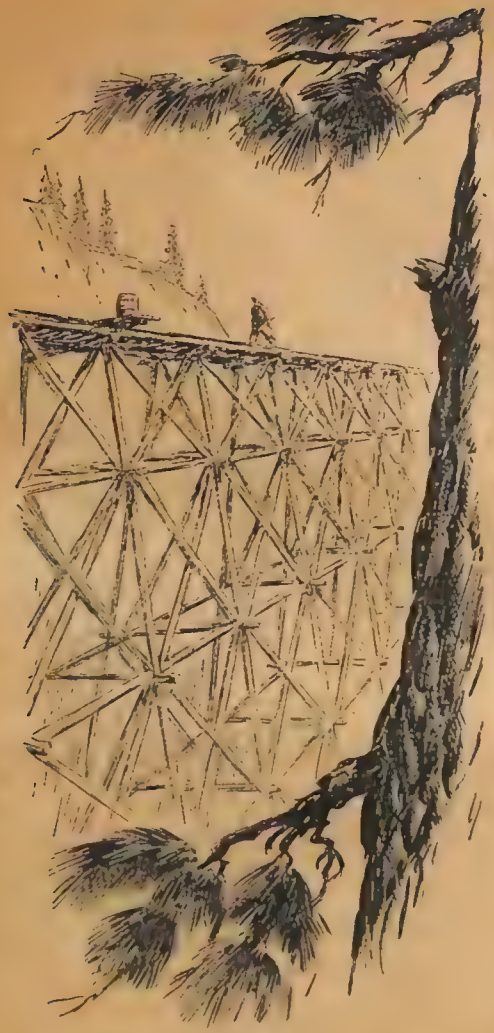
From as far back as I can remember I have glorified the boomer. Early in life I was bitten by the wanderlust bug and adopted the drifter's philosophy. I knew, though, that he was not the best kind of employe. Offsetting his record as a capable workman and a much-needed help in seasonal "rushes" was the boomer's tendency to be reckless. He took too many chances. He realized that if he switched a car off the dock into the river or bulled a train order, all he had to do was pull up stakes and leave the home guards to do the explaining.

But we didn't regard this lack of caution as weakness. We considered it good railroading; and so it was, as long as you won. When you lost—well, there was always another pike beyond the hill. There was always the fabulous Indian Valley Line, where you confidently expected to find a good job under ideal working conditions. The home guard didn't have this easy-going philosophy. Conductor Noble, for example. Noble depended on certainty. His life was tied up with the wilderness where he earned his bread and butter; he had brought his family out there and he had them to think about. So he played safe.

Though many floaters connected with the new extension of the St. Paul road, they were gradually weeded out. Some stayed on, but they did it by becoming serious-minded home guards—more power to them! In my case, one slip begot another. Fate did not want me to stay there. If I had remained, most likely I'd be a conductor on the *Olympian* by now, wearing a brass-buttoned uniform and punching tickets as a highly respected member of the O.R.C.

HOWEVER, things didn't pan out that way. I caught a work train somewhere east of Ellensburg, at a point where a high trestle was being completed. There, on an aerie in the cliffs above the bridge gang I was

CAN YOUR SCALP PASS THE
*F-N TEST?
*The Famous Finger Nail Test
1 "It's F-N, the test for men!" Scratch your head—if you find dryness or loose dandruff you need Wildroot Cream-Oil. Buy the large economy size.
YOUR HAIR CAN LOOK LIKE THIS WITH NEW
WILDROOT CREAM-OIL
2 Keeps hair well combed all day without that greasy look! Grooms without grease! Relieves dryness, removes loose ugly dandruff. Your hair looks good and feels good.
NON-ALCOHOLIC
CONTAINS REFINED
LANOLIN!
3 Refined LANOLIN is a soothing oil that closely resembles the oil of the human skin. Get Wildroot Cream-Oil from your barber or druggist.
WILDROOT CREAM-OIL



WORST part was the hike across the trestle. Even now I have nightmares of being caught by a train

assigned to protect them from westbound trains. That seemed to be the loneliest job in the world. From the rocky seat where I sat I gazed down into a vast valley in which traveling horsemen looked like crawling ants. On the other side I could see below me the busy laborers and the work train shuttling hither and yon. Down there were the companionship and banter of a hundred men, while I sat alone with clouds wiping my face, the pale sunshine, and a biting wind. I never did get warm up there, although I carried a load of scrap timbers up each day to feed my fire.

The worst of it was the hike across the trestle. I doubt that there was a catwalk, for even now I dream of getting caught by a train. Four times a day I crossed it. In the morning I had to go out to protect the work train. At noon they would call me in by whistle when they got into the siding. By the time I got in I ate by myself, for they all hit the grub right away.

I was pretty vulnerable, there being no flagman—except myself, and I was the potential victim crossing the bridge. Trains would scoot along pretty fast. Halfway across stood a little platform on which rested a barrel of water for use in possible bridge fires, and that was my first objective. If you were trapped on any other part of the bridge, you could take your choice of butting the engine off the track, jumping a couple hundred feet, or dangling down from the ties while the wheels rumbled above you.

At length I got fed up on it. One day when a freight came trundling down the grade, I lay still on my rocky bench and thumbed my nose at the engineer as he went by. I was in the clear. I had two torpedoes a quarter-mile up, then another about a hundred feet further on, so the engineer was obliged to acknowledge me or stop.

He whistled that he saw me, and went through fast. That riled me. At least, he could have slowed down and said hello. So I saluted him. I hoped he might stop and converse with me. Instead, he halted at the bridge and turned me in.

I deadheaded back to Malden to see silver-thatched Murphy, the train-

master. To my surprise, the brass collar did not bawl me out, but spoke with understanding and a kindly heart. Where I had expected a knock-down-and-drag-out fight, here was nothing to battle. I told him that I'd had my torpedoes out, and the eagle-eye knew the bridge gang had been there for months.

The trainmaster nodded. "I thought so, Mr. Swan. Whatever they say against you boomers, you usually have your end well covered. But you fail on one point; you're anxious to run things your own way. If you think you shouldn't wave the flag, you don't."

"That place got my goat," I told him, "and I tried to figure out the fastest way to leave the job."

"You aren't the first one," replied the T.M. "One after another, they all throw it up. Well, I can't put you back there; but I'm going to send you to Othello to work for Pete Caulwell. He's a bad one. He usually throws his brakemen into the Columbia when they act up."

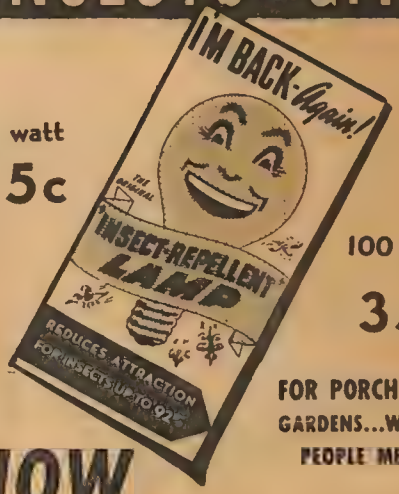
That didn't phase me. "He'll go in too, then. I've met that kind before and they don't scare me."

"Well," said Trainmaster Murphy in a conciliatory tone, "you behave and you'll have no trouble."

I FOUND Pete Caulwell sweeping out his caboose at Othello. He was a giant of a man, rawboned, red-haired and powerful, but he was fair in all my dealings with him. I saw that he had neither head or rear brakemen, but I never did learn whether or not he had thrown them into the Columbia. I can imagine Murphy reproving him in a gentle voice: "You know, Pete, brakemen are hard to get."

In a day or so, another floater came

INSECTS GIVE



60 watt
25c

100 watt
35c

FOR PORCHES—
GARDENS...WHERE
PEOPLE MEET

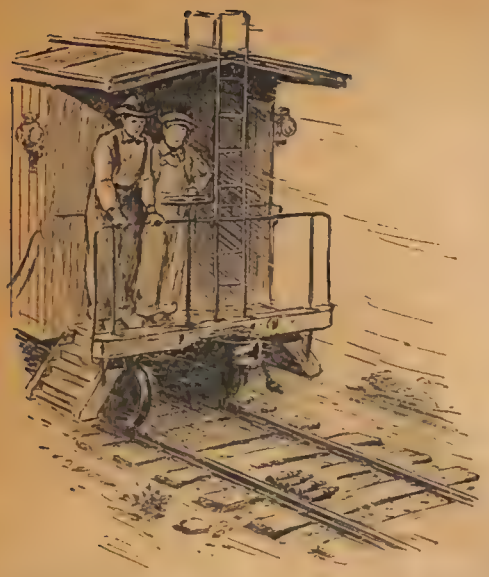
NOW
AVAILABLE!

Discontinued after "Pearl Harbor", but now again available in two sizes, 60 and 100 watts. Now, you can enjoy your summer evenings out-of-doors with ample light and a minimum of night flying insects.

● On sale at neighborhood stores, this new lamp bulb is easily available. Just try one today. Prove to yourself and family its merit—then only—buy more.

Attractive Folder
Sent FREE Upon
Request—Write NOW

VERD-A-RAY
TOLEDO 5, OHIO



FOUR dead soldiers hove into view, lying in pristine-order between the rails

down from Malden to fill out the crew. He was a big fellow, lately switching for the Northern Pacific up in Spokane. Usually he wore a square blocked derby. This boomer was bow-legged, but like most of the tribe, was quick as a cat on his feet. You had to be, in those days. Survival of the fittest.

Being there first, I took the hind end. The brakeman from Spokane turned in a good performance, and Pete didn't bother you if you did your job well. Just the same, I was getting restless. Spring had merged into summer; and desert toil, particularly making up your own train at Othello in the blazing sun, didn't appeal to me.

One torrid noon we were combing the Othello yard for what was to be our train west to Cle-Elum. I was sweating like an ox. My tongue was practically hanging out from thirst and I kept glancing wistfully across the garden to a gin mill on the sandy street where iced amber flowed. Pretty soon I could stand it no longer. I told the big boomer from Spokane that I was going over to wet my whistle. That, in a day when Rule G was enforced rigidly, was near anarchy, especially in view of the fact that bits of our train were strung out in various parts of the yard and cluttering up the main. Our puritanical conductor was at the station trying to get his papers lined up, so I decided to take advantage of his absence.

My side kick, I could see, was giving deep thought to my proposal. He didn't want to get fired just yet, but after a while the temptation proved too strong and thirst won out. We took on some beer. So dehydrated we had been that I knew we'd soon be parched again about ten minutes after we'd gone back to switching. To guard against this contingency we brought along four bottles. These we laid under a car on the main, intending to polish them off later.

Well, we got our train made up on the main and were just reaching for the bottles when Pete came up unexpectedly with train orders and clearances. He was standing only a few feet from our cache of hidden beverage as he went over the train orders with us. Then he gave copies to the head brakeman to take up to the cab. I never saw a man more reluctant to leave any place than my comrade was then, but Pete stood there waiting, and the big fellow had no choice.

That was his hard luck, I reflected. I saw no good reason why it should prevent me from gurgling at least one good drink myself before we pulled out of Othello. The problem was to lure Pete back to the caboose before me, so I could drag the bottles out. This called for strategy. I highballed the engineer, knowing that the

con wasn't fast on his feet and would start walking back to the crummy before it got going too fast.

The hogger pulling their tail didn't worry me a bit, because I could glom them at a fairly high rate of speed, but I didn't intend to board the caboose. My plan was to snatch a couple of bottles, catch a gon, and guzzle them at my leisure. Of course, I'd have to be speedy to reach in there and grab the bottles between the rolling wheels of the front and rear trucks.

But Pete wouldn't take the bait. He was a teetotaler, as I remember. Besides, I suspect that he was onto my game, or was offended at my solicitude about his being able to catch the caboose, as I had been egging him to go back. Even if a man is crippled with rheumatism and has flat feet, he still has his pride. So I attempted a new tact.

"There's a dynamiter along here somewhere," I told him. "I'll stick around and try to pick it out."

A dynamiter, in case you don't know it, is a maverick freight car with a defective triple valve that goes into emergency under a simple service application. It can play hell in a rolling train. Pete maintained a grim silence. As the train was now going so fast that I'd get my arm cut off if I reached in for a bottle, I spoke to him again.

"Guess she won't blow again."

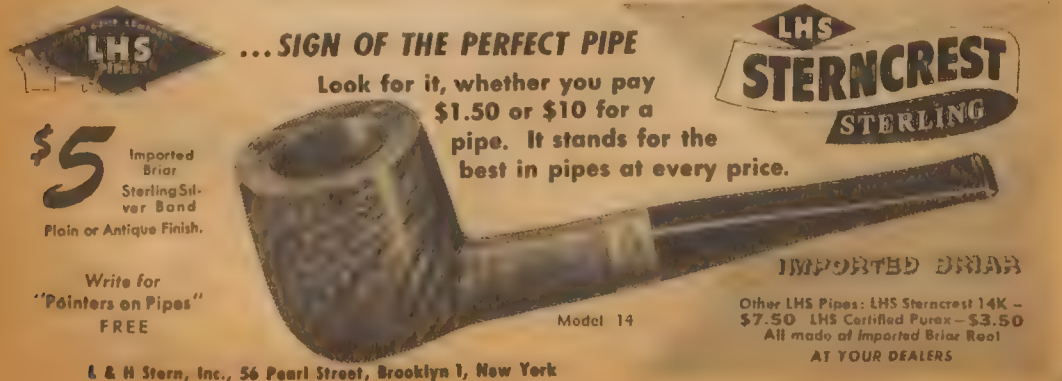
This referred to the dynamiter. We started back to the caboose, which was now trundling toward us. The cars were rolling about twenty miles an hour, but eighteen was top speed for me. Pete couldn't possibly make it, so I turned and gave a slow sign.

That's a swell way to boil an eagle-eye who is just getting under way. Our man slowed down, but answered with his whistle in an exaggerated air as if to say: "Okay, you smart alecks! Got caught with your pants down, didn't you? Why don't you grab a boxcar and go back over the tops?"

Maybe the fact that he had my Spokane friend up there in the cab had something to do with his ready compliance, for the big fellow was a tough *hombre* and sore as a bear at being deprived of the beer.

Pete was bullheaded that day. He was going to make me walk ahead of him and he himself would board the crummy as a master, the last one on; so I ignominiously hastened along ahead of him. I caught it first, after which Pete swung on with a set face.

We both stood on the back platform, breathing hard. Then, right under our eyes, the four dead soldiers


LHS
...SIGN OF THE PERFECT PIPE
Look for it, whether you pay $1.50 or $10 for a pipe. It stands for the best in pipes at every price.
LHS
STERNCREST
STERLING
$5
Imported Briar
Sterling Silver Band
Plain or Antique Finish.
Write for "Pointers on Pipes" FREE
IMPORTED BRIAR
Model 14
Other LHS Pipes: LHS Sterncrest 14K – $7.50 LHS Certified Purex – $3.50
All made of Imported Briar Root
AT YOUR DEALERS
L & H Stern, Inc., 56 Pearl Street, Brooklyn 1, New York

hove into view, lying nicely in pristine order between the rails. The sun glinted on their amber goodness as we rode away from them. I took off my hat in reverence to their death on the hot desert sands. I've often wondered who found them and with what mystified conjecture. Pete, their murderer, just stood there with graven features that gave no sign of having seen them.

DESPITE all of the lurid fiction about runaway trains, only once did I serve on a crew that had to help out that way. That occurred on Beverly Hill, because the hogger could not get his train-line charged properly, or thought he couldn't. Every time he built up a little pressure he had to give the train a shot to keep it under control, so he yelled for hand-brakes.

At least, I give him credit for keeping his hands off the brake valve while we were tieing them down. One of the fastest ways to kill a trainman is to slap on the air while he is clubbing a brake-wheel. To a lad heaving his weight against the club, swung out in the air, there is nothing as sickening as to feel the wheel go slack, offering no more resistance than the air when the eagle-eye slugs the train. Men have tumbled off cars and under beneath the rolling wheels in that manner.

This runner had a cool head. When he had built up his pressure he whistled us off before. He waited until I had received a highball from the hind end, showing that they understood, and until I had passed it along to him. Then came a cracking and a buckling as he threw all he had into the train.

A similar case happened on Beverly while I was there. This was a young engineer fresh from the prairie lands. He got scared while coming out of the tunnel. The train seemed to be getting away, so he slugged it. Whether or not he had been short-changed on the number of pops, no one was ever able to find out; but the train didn't seem to hold when he released to recharge. Then, in a panic, he made a mistake.

After he had shot his bolt, the air pressures equalized. Instead of recharging, he kept fanning the air-brake into useless applications. The fireman, a boomer engineer working under a flag and trying to get back running, crossed over and took the seat. He whistled for hand-brakes, then methodically and coolly built up his train-line. At length, after whistling the trainmen off, he brought her under control. Luckily, the train crew in that emergency were all old heads. It might have been a different story if the crew had been young and jittery.

One day I found out what a tough, one-track mind the Spokane drifter had. We were making up our train at Othello for an extra west to Cle-Elum. The Othello yard was crammed, as usual. We had to hunt and pick our cars. There were so many line-ups that we worked the east lead first, throwing cars for the middle of our train onto the passing track. Having some stock cars and zulus (immigrant cars) that, because of age, had to be near the caboose, we shot them down the lead and our caboose after them.

We chose this set-up because we had a few inflammables or bad orders, I don't remember which, buried near the opposite west lead. These cars also, because of their nature, had to be near the caboose. Rather than pull this entire track from the

east, we went down the main to get them, intending to come back to the east end, drop them onto the passing track, and then shove our caboose and B.O. cars against them. Thus our rear end would be made up; we'd go down to the west lead and switch out the rest of the train there.

All of these were good switching moves, but a freight came in from the east and as we jogged along the main our thick-headed engineer was slow in whistling him down, so we were hardly able to get our engine and cars past the east switch. We had intended at this point to make a drop, or flying switch, putting the engine on the main and then rolling our cars down the passing track. But with this fellow from the east there we didn't have room, nor had we left enough space on the lead to make the drop there.

"We'll have to make him back up," I said to the Spokane boomer, "or maybe he'll cut off his hog and shove them for us."

THE HEAD BRAKEMAN from the freight strolled up. "Kick them down the lead for us, will you?" I asked him.

"What's the matter with you fellers shovin' the lead?" he suggested. "You can make your drop then. The hogger's so burnt up at bein' stopped here that he won't turn a wheel for you."

The Spokane lad glowered at the engine. "I've got a good mind to go up there and turn his wheel for him."

But the head brakeman was more practical. "He's a big guy and a bad *hombre*. Better leave him alone."

"Let's shove the lead and be done with it," I told the Spokane drifter, but he was in a nasty mood. To be thwarted by two engineers made him stubborn, and he growled:

"There's room enough as it is to clear it."

"Not with that guy in the cab," I said, referring to our stodgy engineer.

"The hell there ain't! I'll make him do it, if it's the last thing I ever do."

That wasn't exactly cricket. Being on the hind end, I carried the switch list—that is, I had to figure the moves to get the train together, and the fellow on the engine was supposed to follow directions.

But with old heads on the train, especially an accomplished switchman like the Spokane guy, you don't do that. The head brakeman plans along with you. I know of no other

THERE'LL BE NONE FINER
Motorola
A-M
F-M
Radio
HOME RADIO · AUTO RADIO · AUTOMATIC PHONOGRAPHS · TELEVISION · GALVIN MFG. CORPORATION · CHICAGO

"HERE'S my lamp," I said. "Maybe you'll do better next time"

industry where two minds can meet with a series of similar thoughts as in railroading with two experienced men in complex maneuvers like these. You give your partner his head; only to newer men or students do you signal each play.

If I took the play away from the boomer now and shoved the lead, he would sulk in his tent and make me lay out every move. He would merely take the engine around as directed. Although rails have an elaborate sign language, I didn't relish the thought of having to tell him by signs to pull Track 7, throw out two, one back, two onto Track 5, two onto the train, and so on. So I gave in.

"You're calling them," I said. "I'll cut and ride."

This put him at the switch, making signals and in charge of the operation. After walking back, I climbed onto the stirrup of the first car and, hanging over ready to pull the pin after we got going, gave a highball. Then I looked up and saw a look of frightened incredibility in the engineer's fat, foolish face. The boomer seconded the highball, signifying that he was ready to throw the switch as soon as the engine got ahead of the car. The hogger gave a toot of his whistle as if to protest: "Hey, what's going on?" A tough throttle artist would have called for signals, seven loud harsh blasts, making each one menacing. That would have told us off.

But all this gent had was just a weak little squeak which betrayed his character. I walked up to the cab.

"Where are you putting me?" he quavered.

"Can't you see?" I answered. "Onto the lead."

At the same time I felt sorry for the fellow. Right was right. In making a drop you have to get going, then slacken a bit so the brakeman can pull the pin, and after that rush away from the cars. To get away from them fast enough you need some room to run out your burst of speed. Here we were asking him practically to stop after he got over the switch points.

"I can't make it," he wailed. "Shove them and give me a chance."

The Spokane fellow came up then and demanded, "Didn't you see my signals?"

"I can't make it," he repeated.

"What's the matter? Are you yellow?" sneered the boomer. "Get off that engine and I'll show you how."

THAT might not have been an idle boast, because nearly all boomers, sooner or later, learned to run an engine after a fashion; but I doubt that even an experienced hogger would have tried it.

The fat-faced runner looked at me

appealingly. He was the picture of indecision.

"You can make it easy," I lied.

At that, he had it easier than I. There wasn't much room on the passing track, and I would have to lean way out, just above rolling wheels, get the pin when he horsed the engine over, and then scramble for the hand-brakes and stop the inflammables and bad orders before they hit too hard. Chalk up another black mark against the boomer clan for such insane tactics. But I wasn't complaining. You had to stick with your kind, even though they did some dizzy things.

We backed up as far as we could, in order to get a run. The lad on the main wouldn't move an inch for us. Instead, he amused himself by whistling at us for the delay, peremptorily calling for signals. He made such an ungodly clamor that I swung him down, but I did it in a friendly way. I didn't want him to pull by us and put his train away at the west end. We had to get our front cars up there and I didn't like the idea of horsing his stuff around too.

We were now ready for the drop. The pudgy gent in the cab was scared, I could see, but he made a valiant effort to go through with it. He pulled them as fast as he could, then horsed back so I could get the pin, and started up; but he lost his nerve and ground to a stop.

"Can't make it," he quavered again.

I honestly felt sorry for the fellow. He was right about it, but business was business.

The boomer strode up, his face livid. "You fat louse!" he shouted, "Come down out of that cab and I'll make a real coward out of you!"

It was now dusk, and to cover the tense moment I took our lamps off the engine and lit them. Silently I gave one to my side kick.

"Let's get going," I said. "We've been here three hours already and we still have the division to get over."

"He'll do it before I leave," snarled the boomer. "Back him up."

Next time was no better. The hogger went into a period of uncertainty and slowed down. But the big bozo acted quickly, faster than I believed he could travel. He ran forward toward the engine and heaved his lamp. It shattered against the window frame and the splintering glass cut the engineer's face. The poor fellow just sat there as in a trance, drifting along. I had to holler at him to catch me on the string behind him. He eased us to a stop.

Well, it was time for me to make

For America's Finest Sloe Gin Fizz or Collins
DuBOUCHETT
MANY. BLANC
SLOE GIN
"THE ARISTOCRAT OF ALL SLOE GINS"
Produced and Bottled in U.S.A. by
MANY, BLANC & CO., INC. Chicago 32, Illinois
FREE!
COCKTAIL RECIPE BOOK
Beautifully illustrated in Full Natural Colors. Write Dept. P for your copy.
60 PROOF
Sloe Gin

a decision. I did it. I walked up to the head brakeman.

"Here's my lamp," I said. "Maybe you'll do better next time."

The lump sat there in the cab, google-eyed. This was the payoff. He must have sensed that, if necessary to gain our objective, we would use up all the lamps in the yard on him. Even though I hated myself for it, that was the only thing I could do under the circumstances. The boomer code was rigid.

So we tried again. This time the fellow in the cab performed as nice as pie. We shoved the zulu and our crummy against the train, then went out on the main, where the engineer kept tooting at us. My Spokane pal glowered at him but said nothing.

MAXWELL SWAN

He got a measure of revenge at the other end of the yards. There, we had to pull a number of tracks to fill out our train. Doing so, we would ordinarily leave a few tracks pretty well denuded where the other fellow could fit in his train. But the bullheaded boomer wouldn't have it that way. Instead, after we had gotten the cars out the way we wanted, we pulled all of the remaining cars up flush with the lead, so that the lad on the main couldn't tell which had empty spaces.

IN DAYTIME a brakeman could climb a boxcar and survey the field, but at night he had to walk down all the tracks and inventory them or else test by blindly shoving on track. The boys of those days didn't much on inventory. It was better to ease the train in against and let the throttle jerker shove until you got a washout from your buddy who'd be down at the lead at the other end of the yard, telling you they were coming through.

With the yard the way we should have left it, they would have a little power of selection and could pick the easy ones. This way they would have to bunch each track. So that's what we did to the smart-aleck crew. It was equivalent to cutting off your nose to spite your face, for it meant extra work for us. We were both in a mean mood and gloated all night over the fact that the tough hogger had been forced to horse his engine over a dozen times, when he would have had to do it only once for us.

At length we shoved off. Spokane guy caught the caboose as we had a goodly stretch of desert ahead of us, with no meets requiring him to be at the head end to let the engine in. I cooked bacon and eggs, after which the boomer, Pete, and I sat down to a meal.

That meal I will long remember. Through open doors and windows wafted in the sweet fresh smell of the desert at night. We sat in utter contentment smoking hand-rolled cigarettes, while Pete dragged on his pipe. Of all the other occupations in the world, I know of none with the comradeship that railroading has. Even on miserable nights, there would be an invisible bond between the switchmen on the footboards going down into the yards in a swirling snowstorm.

I took a good long look at the lad from Spokane that night while the

Photo by C. E. McCann, 2026 Colfax St., Evanston, Ill.

MILWAUKEE speed queen of the early 1900's, Baldwin's compound 908 had unusual dome-shaped headlight

starry-domed desert swept by. I had hardly known him up till then. It was the first time I had encountered his doggedness. The caboose lamp caught his squinty eyes and they were as blue as his thousand-miler blue shirt. They were also as honest as his square-blocked shoulders, albeit, they were always glacial.

I sized him up as a rugged man who lived as he saw it, an endless feud between engine and train men. We didn't realize it then, but we were just about the last of our breed. The glorious epic of the boomer was washing out on the sands of time. We were heading into obscurity because of changing conditions, just as the buffalo hunters and the long rifle men went, to disappear slowly from the American scene.

Looking back from our cupola seat, we could see, across a vast spread of desert, the yards at Othello, where the headlight of our friend on the main line was still shuttling to and fro. In that desert country you can see for great distances, due to the clear air and the flat country. The road out of Othello, as I remember it, makes a wide curve out to the south and west, and you can see as far as the curvature of the horizon will let you.

Well, there it was, a desert drama in which a squinty, blue-eyed boomer ran things to suit himself. Here ran a mighty transcontinental road, yet its vast web was interrupted by a drifter and he got away with it. Such scenes were repeated an infinite number of times by the once influential boomer.

Where was the supervision? you ask. There was tired old Trainmaster Murphy trying to push trains through raw land and with raw me[n]. There was Moll, the Superintende[nt], an enormously fat man as I rem[em]ber him, also weary. Neither of

were the story-book type—you know, the kind that caused wrecks and tried to discredit you so they could get your girl. But they were honest men and indefatigable workers. Who helped out? Sometimes the boomer did, with his vast lore of accumulated knowledge. And I don't mean to discredit the lads from the old main line of the St. Paul.

I HAVEN'T many mind pictures of Moll, but I do remember him one stormy day when the yard at Malden, Wash., was tangled into a snarl. Was he in the dispatcher's office where it was nice and warm? No, he was out on top of the boxcars with me, trying to help straighten out the mess.

Ever been on top of a boxcar? Try it some wintry day and see how high and cold you feel. Then try to hike along the catwalk while the train is in motion, from car to car, high ones, low ones, all coated with ice. If there is no boxcar handy and you live in a big city, imagine yourself climbing out on top of an elevated train and riding it around, say the Loop in Chicago or over the Brooklyn Bridge in New York, skipping from car to car. Kinda takes your breath away.

Yes, there was Moll and it wasn't the first time he did it. Picture an executive over three hundred miles of track—a man who didn't come up through the operating end, as I recall —out there in the thick of it. Both he and Murphy were rugged rails. The boomer clan would have been glad to have them as members.

If I remember correctly, Superintendent Moll, Trainmaster Murphy and Chief Dispatcher Sloan had their headquarters at Malden. I don't remember whether or not there was a dispatcher at Othello. Maybe the brass hats had to direct this big division from the Bitter Roots to the Cascades, they could only be at one place at a time, and tired men had to sleep at night.

All along the line, the railroaders, home guards and boomers, were carrying on over mountains, through the desert and in the pinetree land of the Coeur d'Alene country. They were their own dispatchers and trouble men. Each crew was the entire operating system, making its own way.

One time, by a freak accident five trains met at one place and couldn't pass each other. I don't remember where it was. I can only locate the place by saying there was a wye, one of the few on the line, cut into the clearing of the forest. How we all happened to meet there at once is a mystery to me. Some blamed the dispatcher. Perhaps the DS had brought several of them in close proximity, hoping to solve it later. But as old-timers know, on a single-track road where things were new and extras were given their heads to go when and where they had to, such a situation could, and actually did, occur now and then.

Then, too, some of the cons at that time, if caught short on a desirable meet, would put a flag on a train that had the right of way and then follow him out. I think one other crew was guilty of running the same risk. I remember my conductor telling me to climb the passenger train and drop off at the siding where the wye was; but the passenger, instead of going on, was flagged by a freight that was either short on time or had trouble in making the station to clear it.

Any crew, dumped anywhere by itself, would have solved its own troubles. But five of those maverick

trains, one of them a passenger, were put together in one complicated mix-up. All of us brakemen gathered around a fallen tree and built a fire. Someone fished out a bottle and we started to railroad. We were all disgusted. No play for the individual here. Let the brains figure it out. The wye was short; it might hold ten cars or so on each leg.

The five conductors, congregated in a similar knot, had some grandiose schemes for sawing by, in which we trainmen wanted little part. Such moves are nice on the table top on a winter's night to pass the time, but are quite laborious in actual practice.

I mention our meeting because it was one of those rare times when a lot of us got together and met each other for the first time. The boomer who impressed me most was an ex-doctor who had taken up railroading for some unexplained reason. There was also a seagoing second mate who had lost his maritime papers and gone braking.

A fellow from Mexico, relating his experiences, held the stage the longest. Mexico had a glamor that no land could at that time. He told us about dark-eyed senoritas, women with undying loyalty to the men they love, explosive and jealous, and their rivals; and unforgetable nights at the cantinas, and chance shots in the dark, and bits of revolution and railroading, and the money he had made.

Yes, Mexico was a land of romance. It had been my objective when I went railroading, but I had to learn the trade in the States first. Before I could visit the southern republic, revolution had come in and the boys

Swing to Saraka ... and Feel New

Let Saraka help you to greater regularity

If you are troubled with constipation, swing to Saraka. Start the day fresh as a daisy, with that "new" feeling.

Saraka contains two important ingredients. The first supplies the soft, smooth bulk your system needs, and often lacks. The second supplies gentle, yet thorough action that results in easy elimination.

It's a two-fold balanced action, *Bulk Plus Motility.* For this reason doctors recommend Saraka.

You can buy Saraka at your favorite drug counter. Or, if you'd first like a sample, mail in the coupon for a free, trial-size package. But whichever you do, do it today.

Caution: Use only as directed

SARAKA, Dept. 836, Bloomfield, N. J.
Without obligation on my part please send free package of SARAKA.

Name_____

Address_____

City_____ State_____

© 1955, Union Pharmaceutical Co.

PRIDE OF THE ST. PAUL ROAD long before Maxwell Swan's birth was the 71, built in 1848 at Norris Works, Philadelphia, as No. 1 of the old Prairie du Chien Division. She was originally named the ***Bob Ellis***, renamed the ***Iowa***, and goes down in history as the first engine to turn a wheel in Wisconsin. She was standard gage, with 14x26-inch cylinders, 51-inch drivers, 108 flues each 2 inches in diameter and 10 feet long, and firebox 45 inches long, 36 inches wide and 41 inches high, and weighed 46,000 pounds. Dismantled in 1883

were streaming back across the border. These facts surged through my memory. As we listened, our fire burned low and the bottles went the way of all good bottles.

Finally the conductors got the passenger train past the blockade by sawing and backing up a train and getting another one, ourselves, out by putting a flag on her. Soon there was nothing left on that spot but the dying embers and a few empty bottles. So far as I know, I never saw any of those fellows again, except the former doctor. Him I met only once after that night. I'll tell you about it next month.

Monkey Motion

ENROUTE from Chicago to Columbus, Ohio, through eastern Indiana a few weeks ago a Pennsy mail-express suddenly stopped for no apparent reason, reports O. C. Thompson, a retired PRR engineman of West Lafayette, Ind. The puzzled conductor hiked up to the head end to ask why.

"I got a whistle to stop," replied the equally mystified hogger.

"No, you didn't," denied the brains. "Not from anyone in my crew."

A few miles further on, the same thing happened again. Inspection of the train-line revealed no leak that might have blown the cab whistle.

"We're wasting valuable time," said the engineer. "I'll run to the next water stop and we'll make a thorough investigation while taking on water."

This they did. They found a shipment of small monkeys in a baggage car; one had broken out of its crate and was making a trapeze of the whistle cord. After putting the simian back and securing the crate, the crew were satisfied there would be no more emergency stops that day.

Get More Kick Out of Life

New Scientific Book Tells "HOW TO RELAX..."

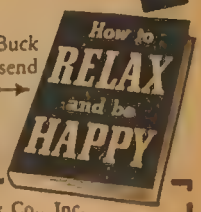
FREE!

Would you like to conquer fear, trouble and worry? Not by a miracle, but by your own common sense, under the guidance of an eminent professor of psychology. This book, "How To Relax" is not an ad; for only men of science could have written it. Yet, it is done with a light, humorous touch. It explains you to yourself: how to "type" your own personality; how to learn which form of relaxation — which hobby, sport or game best fits your "type". This book is not only written for the millions of people who have owned a Buck Skein Joe, but for all, everywhere—it's yours for the asking.

Styled by BUCK SKEIN JOE

Whether or not you own a Buck Skein Joe wool shirt, I want to send you this great book. **FREE** Mail Coupon. No obligation.

Buck Skein Joe



Buck Skein Joe, Lustberg-Nast & Co., Inc.
212 Fifth Ave., Dept. R6, New York 10, N. Y.
I want to Relax. Send illustrated book FREE. ☐

Name_____

Address_____

RATIONED MOTORISTS

Now Get *EXTRA* **GASOLINE MILEAGE**

Now you can get up to 30% extra gasoline mileage with a Vacu-matic on your car. Quicker pick-up, smoother running, added power and precious gasoline savings guaranteed.

Automatic Supercharge Principle

Vacu-matic is *entirely different!* Operates on the Supercharge principle. Saves gas. Automatically provides a better gas mixture. Guaranteed to give up to **30%** extra gas mileage, more power and better performance.

FITS ALL CARS Constructed of six parts, fused into a single unit. Adjusted and sealed at the factory. Very quickly installed by anyone.

AGENTS TRIAL OFFER

Every car, truck, tractor a prospect. Write name, address on postcard for big money making offer and how you get yours for introducing

Vacu-matic Co., 7617-1221 **W. State St., Wauwatosa**

FORBIDDEN FRUIT

"The Aristocrat of Liqueurs"

You and your guests deserve the best—so serve FORBIDDEN FRUIT with pride—before dinner—after dinner—anytime. 70 proof

"GIFT OF THE GODS"

MADE BY CHARLES JACQUIN et Cie., Inc. ★ PHILA., PA.
MAKERS OF QUALITY CORDIALS SINCE 1884

FREE BOOK for HORSEMEN

Learn to break Colts; gait show horses; train stock horses; teach circus tricks. COMPLETE, PRACTICAL INSTRUCTION. Doctor Book FREE! Write ANIMAL LOVERS ASSOCIATION G111 TARZANA, CAL.

REFRIGERATION AND AIR CONDITIONING — SERVICE MECHANICS COURSE

Learn at home—how to start your own repair shop on little capital. No previous experience needed. Common school education sufficient. Splendid opportunity for older men. Prepare now for after the war. FREE illustrated booklet.

MECHANICS TRAINING SCHOOL
4701 W. Pico Dept. R-8 Los Angeles 6, Calif.

High School Course at Home — Many Finish in 2 Years

Go as rapidly as your time and abilities permit. Course equivalent to resident school work—prepares for college entrance exams. Standard H.S. texts supplied. Diploma. Credit for H. S. subjects already completed. Single subjects if desired. High school education is very important for advancement in business and industry and socially. Don't be handicapped all your life. Be a High School graduate. Start your training now. Free Bulletin on request. No obligation.

American School, Dept. HC49, Drexel at 58th, Chicago 37

Watch Crystals You Can't Break

Fit Tight, Dustproof—Any Size, Any Shape

PROTECT YOUR WATCH

to any jeweler—ask for a G-S XO CRYSTAL. 100% BREAKPROOF. be fitted while you wait. Guaranteed.

now-Simon Mach. Co., Rochester 1, N.Y.

Railroad Camera Club

ITEMS sent to the *Switch List* and *Model Trading Post* are published free, in good faith, but without guarantee. Write plainly.

Because of time needed to edit, print and distribute this magazine, all material should reach the Editor seven weeks before publication date. Redball handling is given to items we get the first week of each month, if accompanied by latest Reader's Choice coupon (clipped from page 145 or home-made).

Due to scarcity of space, we prefer that no reader be listed here oftener than once in three months.

Use these abbreviations: *pix*, photos; *cond.*, condition; *ea.*, each; *elec.*, electric; *env.*, envelope; *eqpmt.*, equipment; *esp.*, especially; *info.*, information; *n.g.*, narrow-gage; *negs.*, negatives; *p.c.*, postcard; *pref.*, preferably; *tr.*, train.

And these photo sizes: Size 127—1⅝x2½ inches; Size 117—2¼x2¼; Size 130—2⅞x2⅞; Size 118 or 124—3¼x4¼; Size 122 or p.c.—3x5½; Size 616 same as 116, on thin spool; Size 120—2¼x3¼ inches.

The term *tts.* refers to public timetables, unless preceded by *emp.*, when it means employes' (operating) timetables.

(R) indicates desire to buy, swap or sell back issues of *Railroad Magazine* or its predecessors, *Railroad Man's* or *Railroad Stories. (Specify condition of each copy.)*

(*) indicates juicefan appeal.

The Switch List

JIM ADAMS, 3525 Milton Ave., Dallas, Tex., buys, sells, trades negs. and pix. Send 10c for list and sample. Wants D&SL, T&NO, T&P, NYO&W.

T/5 JIM ADY, 39264777, Co. C, 728th Ry. Opr. Bn., Com. Z-ETO, APO 562 c/o Postmaster, New York City, buys loco rosters SP, AT&SF, UP.

(R) ALAN BAHR, 2795 Brighton 8th St., Brooklyn, 24, N. Y., will buy *Railroad Magazine* Jan., July, Aug. '33; Jan. '34, Jan., June '35, perf. cond., unclipped; *Trains* Sept. '43, June '45.

(R) LYLE H. BAIE, 2008 Cumberland St., Rockford, Ill., will sell *Railroad Magazine* '32 to '43 complete. Sells 00 2-rail model eqpmt.

(*) WALTER D. BARRY, JR., 4052 Purdue, Dallas 5, Tex., buys negs., any size, any road. Send sample print first. Trades Southwest pix, size 127, 620, 116, elec. shots for same size any road, engines, cars.

(*) DUANE BEARSE, 19645 Telbir Ave., Rocky River 16, O., will pay up to $1.50 for A-1 negs. of Cleveland SW and CP&E, L.SE, Indiana, any Iowa roads, any elec. lines. Must be originals, no copies. Has no list. Pix sold on approval.

(R) LT. JOSEPH BENDER, JR., USMC, 1805 Blue Island Ave., Chicago, Ill., wants Jan., Feb. '33 *Railroad Magazine*.

JAMES D. BENNETT, 19 Highland Rd., Stanford, Conn., will sell 10 copies of *Off. Guide*, Apr. '39 to Jan. '45 @ 75c ea., shipped collect. Will sell CPR, B&M, New Haven and misc. size 616 engine and train pix or trade for emp. tts. any U.S. or Canadian road.

(*) G. R. BOEDDENER, 19832 Roslyn Drive, Rocky River, Cleveland 16, O., will pay high price for good

cond., unclipped copy Mar., Oct. '40 *Model Craftsman*. Wants size 122 or larger negs. interurban lines and st. cars. Write first.

(*) ROBT. R. BROWN, 201 Lakeshore Rd., Pointe Claire, Que., Canada, wants pix of old city and interurban cars of Detroit United Ry., 1920 or prior. Montreal pix in exchange.

(*) STUART H. BUCHANAN, 62 S. Dixie Ave., Dayton 9, O., sends list of size 124 pix of C&LE, Indiana RR, other Dayton traction and st. cars for your list or 3c stamp. Sells at 8c ea. or trades. Wants Cleveland SW&Col., No. Ohio Traction, illustrated tts., *Off. Guides* before 1938.

DON CAMPBELL, 135-27th Ave., San Francisco 21, Calif., will sell 1919 *Loco Cyclo.* good cond. Also 1911 *Elec. RR Dictionary*, binding ripped. Both illustrated.

LARRY COBLEIGH, 428½ N. Kenmore, Los Angeles 4, Calif., buys loco pix any size UP, SP, AT&SF, esp. UP Cities streamliners.

(R) FRED CONNOLLY, 150 Market St., Galveston, Tex., trades for good U. S. covers, unclipped, *Railroad Magazine*, July '43, Mar., June, July, Aug., Sept., Oct., Nov., Dec. '44, Mar. '45, good cond.

NED S. COX, 2413 S. Elm., Muncie, Ind., will sell steam pix. Write what you need. Buys NKP Clover Leaf and Lake Erie & Western pix, any size.

(R) NORMAN DOUGLAS, Box 3352, Brentwood, Calif., sells *Railroad Magazines* 20c ea. plus postage, all have covers, good cond., Jan., Mar., Apr., May, June '36; Apr. '37; Mar., Apr., May, July '38; Mar., Apr., May, June, July, Aug., Sept., Oct., Nov., Dec. '39; Jan., Feb., Mar., Apr., Aug., Dec. '40; Jan., Feb., Mar., Apr., May, July, Dec. '41; Jan., Feb., Apr., May, July, Oct., Nov. '42; Apr., June '43; Jan., Feb., Mar., May, June, July, Aug., Nov., Dec. '44.

CHAS. F. DURGIN, 10 Fairview Ave., Derry, N. H., trades 90 card tkts., unused, Sandy River Line, for any small roads, outside N. E.

(*) TED ERIKSEN, Ukiah, South, Ukiah, Calif., wants pix of gas-elec., gas and gasoline-Diesel cars. Wants NWP 900, CWM 80 and M 200, buy or trade.

W. J. ERICKSON, Box 203, Londonville, N. Y., wants pix of New York State rrs., esp. action shots or smaller lines. Will pay 10c for list and sample.

BEN FRIOR, 4400 Norwood Rd., Baltimore 18 Md., will buy emp. tts., any road, also PRR pix and negs.

(*) NICHOLAS GANAVAZOS, 641 Stanbridge St., Norristown, Pa., wants pix of Minneapolis and Montreal PCC cars, Boston subway trains; also Memphis transfers and tokens.

(R) W. E. GLOER, R. 5, So. Omaha 7, Neb., will sell *Railroad Magazine* '39 to date, 15c ea.; UP rulebooks, $1 ea.; Milw. rulebook $1; tts. UP, 3 div., 10c ea.; UP condr badge $1 ea.; trip passes, 15c ea.

Pfc. DEWEY GOULD, 36636164, HQ. Co. Annex, PJG&CH, Butte Creek, Mich., will trade B&O train orders 19&31 for IC 19 and 31 orders.

FRANK W. GUERNSEY, 2000 N. E. 58th Ave., Portland 13, Ore., will trade pix of 50 diff. roads for pix or negs., any size of UP, NP, SP. Wants SP 2421, 4011, 4013, 4022; 2-8-8-2 and 4200's 4-6-6-2.

ANDREW R. HARRISON, 2864 Camulos Pl., Los Angeles 23, Calif., wants you to send him post card picturing rr. station and he'll do same.

R. F. HIGGINS, 419½ Katahelin Ave., Millinocket, Maine, will swap colored view cards of Maine for those of rr. scenes, trains, engines, etc., also RPO cancellations on entire envelop or card.

FRED O. HOOD, 56 Burton St., Walton, N. Y., has 8 Erie monthly passes, 1878-'79, ea. diff., to exchange for loco pix or rr. calendar suitable for framing.

(*) Pvt. HAROLD J. HARGRAVES, 31209025, H. Q. Det. S. C. U. 1458 P.O.W.C., Fort Jackson, S. C., will buy size 116 or 616 or p.c. horse cars and early elec. st. cars, open or closed. Wants to hear from John A. Riepe.

THURLOW C. HAUNTON, 190 Bath Ave., Long Branch, N. J., will sell size 616 pix Penn. & Atlantic, set of 5 for 50c.

ELMER E. HOSIER, 542 E. Washington St., Pasadena 6, Calif., will buy loco. or other Fall Brook Ry. pix, any size.

HEINZ JOHNSON, 218 East Spruce St., Titusville, Penn., wants engine pix, size 116 or p.c., of PRR, NYNH&H, NYC, Erie, short lines of N.W. Penn., snowplows.

LLOYD A. KEYSER, 1622 Greene Ave., N. E., Cedar Rapds, Iowa, wants C&NW pix of 2900's, 3000's, 4000's, any size. Send your list.

(*) FRED KRAMER, 3721 Rosemont Ave., Drexel Hill, Pa., will trade Phila. Sub. and Phila. & Western tts. for those of any city or interurban line, esp. South or West.

LeROY O. KING, 3114 N. Street, N. W., Washington 7, D. C., wants pix and info. on 28-ft closed motor cars

Overnight...

YOU'LL HAVE

SMARTER LOOKING HAIR!

Convince yourself with one application of this famous 3-Way Medicinal Treatment

Phil Regan is one of the many Hollywood stars who use Glover's 3-Way Medicinal Treatment for a quick, easy freshening of scalp and hair. And remember, it's *easy* to apply. Try all three of these famous Glover's preparations today—Glover's original Mange Medicine—GLO-VER Shampoo—Glover's Imperial Hair Dress. Use separately, or in one complete treatment. Ask for the regular sizes at any Drug Store or Drug Counter—or mail the Coupon for all three products in hermetically-sealed bottles, packed in special carton, with useful FREE booklet. "The Scientific Care of Scalp and Hair."

Your Hair will Look Smart with

Glover's

with massage for DANDRUFF, ANNOYING SCALP and EXCESSIVE FALLING HAIR.

Guaranteed by Good Housekeeping

MAIL THIS COUPON TODAY!

GLOVER'S, 101 W. 31st St., Dept. 9-A-8, New York 1, N. Y.

Send "Complete Trial Application" package in plain wrapper by return mail, containing Glover's Mange Medicine, Glo-Ver Beauty Shampoo and Glover's Imperial Hair Dress, in hermetically-sealed bottles, with informative FREE booklet. I enclose 25c.

Name .....

Address .....

City ..... Zone ..... State .....

☐ Sent FREE to members of the Armed Forces on receipt of ... to cover postage and packing.

Tappin's AMAZING RENSIE WATCH VALUES

Your choice of these Nationally Advertised beautiful RENSIE Watches for examination and 15 day Trial! Send no money . . . simply indicate your choice on coupon below giving number and price, and a brief note telling who you are, occupation, age, draft status, etc. We will send your selection by express for examination. If satisfied, pay the Expressman 1/3 down payment, (required by Federal Regulations). Pay balance at rate of $5 per month.

INCL. 10% FED. TAX - $43.95
101 — 17 Jewel RENSIE Military Watch. Waterproof. Anti-Magnetic, Shockproof. Luminous Hands, Numerals. Sweep second Hand. Stainless steel Back.
Pay $14.65 on arrival - $5 a mo.

INCL. 10% FED. TAX - $32.95
202—17 Jewel Men's handsome RENSIE Watch. Yellow Rolled Gold plate. Stainless steel Back.
Pay $10.98 on arrival - $5 a mo.

INCL. 10% FED. TAX - $32.95
303—17 Jewel Ladies' dainty RENSIE. Yellow Rolled Gold plate. Stainless steel Back. Cord band.
Pay $10.98 on arrival - $5 a mo.

Your JEWELRY BARGAIN BOOK Free

Tappin's JEWELERS, INC.

Tappins' Jewelers, Inc.
Dept. P-81, 823 Broad Street, Newark, N. J.

Send me No.....Price.....After examination, I agree to pay $.....and $5 monthly thereafter 'till full price is paid. Otherwise I'll return selection within 15 days and you will refund my money.

Name .....

Address .....

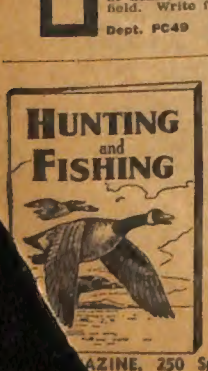
City .....State .....

PLASTICS

TRAINED MEN NEEDED IN NEW, ESSENTIAL INDUSTRY

Plastics, those new materials already indispensable in war production are creating unlimited opportunities for tomorrow. Learn how you can train at home, in spare time, to enter this great new field. Write for FREE BULLETIN. No obligation.

AMERICAN SCHOOL
Dept. PC49 Drexel at 58th St. Chicago 37, Ill.



HUNTING & FISHING

is a monthly magazine crammed full of hunting, fishing, camping, dog and boating stories and pictures, invaluable information about guns, fishing tackle, game law changes, best places to fish and hunt—countless ideas that will add more fun to your days afield.

Special Trial Offer

Send 25c in stamps or coin and we will send you Hunting & Fishing for six months.

HUNTING & FISHING
AZINE, 250 Sportsman's Bldg., Boston, Mass.

RAILROAD CAMERA CLUB is open to all who collect railroad or street-car pictures or other railroadiana such as timetables, passes, train orders, trolley transfers, magazines, books, etc. There are no fees, no dues.

Membership card and pin are given free to anyone sending us the latest Readers Choice coupon and a self-addressed stamped envelope. If you don't want to clip page 145 make your own coupon. Address *Railroad Magazine*, 205 E. 42nd Street, New York City 17. Tell us what you want or what you offer; otherwise your name will not be printed here.

built by St. Louis for W. Ry & E. Co. in fall of 1900.

D. H. KIRKWOOD, Agent B&O, Foxburg, Pa., wants loco and train pix of Pittsburgh & Western, Tionesta Val., Emlenton & Shippenville, Parker & Karns City, Foxburg, St. Petersburg & Clarion, Kinzua Creek & Kane; Bradford, Bordell & Kinzua. Has few various to trade. (*Editor asks: What size pix, Mr. Kirkwood?*)

(R) FRANK KOZEMPEL, 115 N. Forklanding Rd., Maple Shade, N. J., wants complete PRR loco roster in July '41 thru Nov. '41 and Jan. '42 *Railroad Magazine*. Write first.

(R) JOE LAU, 1805 Chelsea Road, Baltimore 16, Md., will trade complete set of *Railroad Magazine* '44 for 22 cal. bullets or for callboards such as "Explosives," "Do not Hump this Car," etc. Also wants trolley and train wreck negs. sizes 616 and 620. Has Baltimore tts.

J. R. LEE, Box 115, Comber, Ont., Canada, will sell pix, mostly size 116, some 130, of CPR, CNR, NYC; few other Canadian roads; or trade for pix of CPR, CNR, Canadian Div. of NYC; also has rr. maps. Send for list.

(*) CARL LOEHLE, 3421 N. W. Pkwy., Louisville 12, Ky., wants pix of Frankfort & Versailles Trac. and Louisville, New Albany & Corydon.

(*) ELMORE F. LUMIS, 437 Shelton St., Bridgeport 8, Conn., wants trolley and bus transfers, token, tts., emp. tts.

(R) RAY LUTTRELL, 1320 Fifth Ave., Huntsville, Ala., wants Mar. '45 *Railroad Magazine*.

GEO. MOCK, Jr., R. F.D. 1, Albany, Ga., wants size 116 loco pix of ACL, A&N, GAS&C, Ga. Northern, also rosters of those and C of Ga. Has ACL and C of Ga. tr. ords. for trade. RPO mailings reciprocated.

TOM MOHR, 2250 W. Giddings Ave., Chicago 25, Ill., buys pix of PM, CGW 4-6-2s, Alton.

A. L. NEELY, Box 35, Arlington, Wash., wants p. c. size pix of geared locos used in logging, Shays, Heislers, Climaxes and other makes of geared steam power, also Nevada Co. Narrow Gage. Will pay 10c for list.

(R) JULIET PAQUET, 173 Sportsman Ave., Freeport, N. Y., will sell *Railroad Magazines* Nov., Dec. '38; Mar., Apr., May, June, July '39; Jan., Feb., Apr., May, June, July, Sept., Oct., Dec. '40; Jan., Mar., Apr., May, June, Aug., Oct., Dec. '41; all '42, Jan. thru Sept. '43; all good cond.

FRANCIS PRIOR, 19 Champney St., Brighton 35, Mass., wants old tts. and emp. tts.

RONALD QUADLIN, 6141 S. Greenwood Ave., Chicago 37, Ill., wants any size pix of PM and Soo Line.

ED H. RECH, Rm. 305, 79 E. Adams St., Chicago, Ill., will sell 4 colored engine prints, framed, 2 *Century* and 2 *Broadway Ltd.* approx. 18x26, one *Hiawatha* unframed, one photo each C&O and *Rocket*. Write for details.

JOE RHODEN, 100 Barnard Rd., Manteno, Ill., wants n.g. pix, pref. p. c. or larger; esp. ¾ front and broadside views; also pix, history, rosters all lines in or entering Georgia.

ARTHUR J. RICHARDS, 21 Briarfield Road, Tyseley, Birmingham, England, offers tkts., info. on British rwys., etc. Wants pix of Southern or Wabash engines, also old magazines for inmates of British hospitals if anyone has some to spare.

Lac. W. H. N. ROSSITER, R, 251017, R.C.A.F., c/o A. M. Rossiter, Oakville, Ont., Canada, has 5x7 speed shots of CNR 6238, 6253 (latest V-2H class) and 6215 hauling fast freight; 6400 on fast pass. train; NYC, 5344 and 5212 on TH&B pass. trains; will trade 1 pix

Model Trading Post

for 4,616 loco pix any road or sell 25c ea. Will buy *History of Baldwin Loco Works; Steaming Up*, by May, and *No Royal Road*, by Custer. State price.

CHAS. A. ROWE, 218 W. Terrace St., E. Syracuse, N. Y., will sell or trade negs. various sizes, PRR, NH, SLDF, Santa Fe, P&E, Erie, C&NW, Milw., DL&W, B&M, BRI, CNR, CB&Q, CPR, C&EI, C&IM, C&O, NYC, UP. Swap for negs. or sell for War Savings Stamps. Terms on request.

(R) DAVID M. SAEPS, 960 W. 5th St., Plainfield, N. J., will sell to best offer *Railroad Magazines* for '37, '38, '40 except Mar., Apr., '41, '42, '43, '44.

P. G. SHARPE, HA 1/c (furloughed Southern brakeman), U. S. N. Hospital Staff, N.O.B.—Bks. #13, Norfolk 11, Va., will buy any size pix of Southern engines, cars, depots, etc.; wrecks of any road; roster of Southern engines; also pix of engines that pulled Roosevelt's funeral train. State price.

(R) JAMES B. SHAY, 57 Summit Ave., West Warwick, R. I., will buy *Railroad Magazines*, tts., emp. tts., *Trains*, *Baldwin Locomotives*.

JOE E. SIEGEL, 7000 Bramble Avenue, Cinn. 27., O., wants *Locomotive Cycl.* '38 or later, good cond., quote price.

(*) GERALD H. STAMBAUGH, Box 96, Ely, Nevada, wants size 116 or larger pix of Chicago Surface Lines, TARS, PSCT, TMERC, LVT. No subways. Send either photos or lists. If prices or pix are not satisfactory, will return at once. Will pay $4 for lots of 100.

DONALD M. STEFFEE, 512 8th Ave., Brooklyn 15, N. Y., will trade or sell emp. tts. of large trunk lines, mostly 1938 to '43. Esp. wants Terminal tts. giving mileages, and short line tts. Send addressed stamped env. for lists.

FRED THACKRAH, 37 Market St., Amsterdam, N. Y., wants 4x6, 5x7 or smaller Kodachrome pix and negs. of streamlined trains. Has sizes 116, p. c., 5x7 streamlined trains. Mail list.

(*) TRANSPORTATION CLUB OF LONG ISLAND 957 E. 49th St., Brooklyn, N. Y., will exchange N. Y. City rapid transit system map, folder for similar route, folder and map from local bus or trolley system in U. S. or Canada or will swap for 15 diff. trolley or bus transfers. (*Editor's note: Hereafter, do not use club names. We will print only individual entries.*)

KEN TROUT, 328 S. Allen St., State College, Pa., will buy p. c.'s and pix of minature trains in amusement parks and resorts. Send material and price. Will return promptly if not acceptable.

ARTHUR W. WEILAND, Box 246, Olmsted Falls, O., wants *Off. Guide*, esp. 1900, 1910, '17, '18, '20, '30. Write date, cond., price.

WESLEY WINTERROWD, 910-6 Ave., S., Great Falls, Mont., wants latest GN rulebook. State price.

Model Trading Post

JAMES BEATTY, 15110 E. 85th St., Chicago 19, Ill., wants Lionel 0-27 hand or elec. switches, 0 gage; 25 volt transf. with controller, and back issues *Model Builder* and *Model Railroader*.

CLYDE BUXTON, R. R. 2, Loveland, O., trades old Ives, Dorfan Lionel and AF freight and pass. cars, only 1910 to '25. Send stamp for list.

S/Sgt. JOHN P. CONEEN, Co. B, 85th Mtn. Inf., A. P. O. 345 c/o Postmaster, New York City, wants 00 loco and tender; will build or buy ready-built. Also wants trackage suitable for elec. set-up and any info. on 3/16-in. stock, based on experiences. Answers all mail.

E. M. COX, 4916 South Crenshaw Blvd., Los Angeles, Calif., will sell model 4-4-2 loco and tenders, elec. driver, 3-in. gage, built around 1910, for $100 cash or trade for live-steam model, camera, or gun. Make offer.

WM. H. COX, 1146½ S. Clark Drive, Los Angeles 35, Calif., wants live-steamer, finished or unfinished; Buddy L train, track, switches. Cash or trade. Will sell 0 gage 4-stall roundhouse and turntable, also set of castings to built Pennsy ½-in. scale live-steamer.

BOB CULLEN, Jr., 34 Marten St., Attleboro, Mass., will buy 0 gage loco, steam or elec., between 1860-1939.

C. F. DONALDSON, 975 Lancaster Ave., York, Pa., will buy plans of W&LE class E-1 Atlantic or class I-2 or I-3 Mallet, clear pix, any size W&LE motive power. Wants W&LE tts.

C. J. DUNCAN, 76-15 35th Ave., Jackson Heights, N. Y., will buy 0 or H0 gage tinplate eqpmt.

CHAS. D. FORNEY, 1530 No. 28, Lincoln, Neb., repairs engines and other model eqpmt. (Editor's note: Charlie is war veteran, model hobbyist since early '30s.)

LYNN H. GRIER, 123 Morningside Dr., Elmira, N. Y., will trade Waltham 15-jewel gold case watch, Sun-

"Finest Collection of Railroad Pictures We Have Ever Seen."

—Minicam Magazine

The nine Trains' Albums of Railroad Photographs are published by railfans, for railfans, and each book is a representative collection of the finest photos on its subject, beautifully printed on special high gloss paper, one side of the sheet only, and with a ring binding so individual pages may be removed for framing without damaging the book. Each book contains several "jumbo" size 14-inch photos, especially suitable for framing.

Once you see one book you'll want all nine:

Book 1—Eastern Railroads
Book 2—Far Western Railroads
Book 3—Midwestern Railroads
Book 4—Colorado Railroads
Book 5—Southern Railroads
Book 6—New England Railroads
Book 7—Electric Railways
Book 8—Pennsylvania Railroad
Book 9—New York Central Railroad

$1 each at your bookstore or direct-by-mail

RAILROAD PANORAMA A colorfully written and accurately factual railroad book by A. C. Kalmbach, editor of TRAINS magazine. The Model Builder book reviewer says, "Seldom does one have the pleasure of reading a book written with such infectious enthusiasm . . . Here indeed is colorful writing at its best, vivid enough to attract any lover of Americana whether he is especially interested in railroads or not. . . . To a fan of long standing this volume is like an extra helping of refreshing ice cream." 223 pages of text, 32 extra pages of fine railroad photos. **$2.75.**

See Your Book or Hobby Store Today or Mail the Coupon

Kalmbach Publishing Co., Dept. 1029-C
Milwaukee 3, Wis.

Here's $..... Please send me albums numbered:
1 2 3 4 5 6 7 8 9

☐ I also enclose $2.75 for "Railroad Panorama."

Name .....

Address .....

DRAFTING

PREPARE NOW FOR A BETTER JOB

Begin *now* to turn spare time into money. Become a draftsman with opportunities for advancement. Be ready to qualify for a good paying job as industry turns to peacetime production. If you are now doing routine drafting work, prepare *now* for promotion to a better job in your field. Send name and address *today* for FREE information.

AMERICAN SCHOOL, Dept. DDC49
Drexel Ave. at 58th St., Chicago 37

Name .....
Street .....
City, State.....

Don't Miss This NEW BOOKLET .... **IT'S FREE!**

- Woodworkers • Machinists
- Artists • Painters • Hobbyists

Tips on How to Get Ahead

Make your time worth real money. This FREE booklet lists today's best money making craft books. Thousands of ambitious men are earning big money because they took advantage of the tips offered in this FREE booklet. Send for your copy today.

THE GATEWAY BOOK CO.
32 N. State Street, Dept. P.B.B
Chicago 2, Illinois

MECHANICS • HOME STUDY

Step up your own skill with the facts and figures of your trade. Audels Mechanics Guides contain Practical Inside Trade Information in a handy form. Fully Illustrated and Easy to Understand. Highly Endorsed. Check the book you want for 7 days' Free Examination. Send No Money. Nothing to pay postman. ☐ Refrigeration $4 • ☐ Radio $4 ☐ Pumps & Hydraulics $4 • ☐ Machinist $4 • ☐ Diesel $2 ☐ Plumbers $6 • ☐ Shipfitter $2 • ☐ Welders $1 • ☐ Auto $4 ☐ Mathematics $2 • ☐ Electricity $4 • ☐ Carpenters $6 ☐ Marine $4 • ☐ Blueprint $2 • ☐ Sheet Metal $1.
If satisfied you pay only $1 a month until price is paid.

AUDEL, Publishers, 49 W. 23 St., New York 10, N. Y.

PULVEX
FLEA POWDER
Kills fleas 25¢ AND 50¢
100% SATISFACTION
...OR MONEY BACK

INVENTORS

Learn now — without obligation — how to protect and sell your invention. Secure "Patent Guide" Free. Write
CLARENCE A. O'BRIEN & HARVEY JACOBSON
Registered Patent Attorneys
526-G Adams Building Washington, D. C.

MODEL RAILROADING
World's Most Fascinating Hobby for Men

We would like to send you a FREE 32-page booklet, "Your Model Railroad," which tells all about this absorbing hobby. Plan now for a postwar railroad of your own in attic, basement or spare room. Just send us a postal card asking for FREE booklet. SORRY. We can't urge you now to subscribe to the MODEL RAILROADER magazine because of paper restrictions but we would be glad to list you as an immediate postwar subscriber

MODEL RAILROADER MAGAZINE
Dept. 1029, Milwaukee 3, Wisconsin

beam Shaver, 2 extra new heads, and cash for 0 gage locos.

C. A. GRUBB, Brocton, N. Y., wants old gasoline tractor catalogs, also small steam engine and boiler 1 or 2 HP.

W. H. HENDERSON, 716½ 12th Ave., Huntington, W. Va., will buy several pair 027 auto. couplers off or on trucks.

R. S. HOLT, 31 Winchester St., Boston, Mass., trades H0 eqpmt. all types, incl. locos and rail for 0 gage eqpmt. Send stamp for ilst.

ROSCOE HURLBURT, 215 W. Main St., Plainville, Conn., will buy Lionel cars 700, 701, 714, 715, 716, 717, 763; 2623 Pullmans; 2800 or 2900 series frts., Q. R. Z. trainmaster; all good cond.

CLARE W. McFARLANE, 3433 N. E. Stanton St., Portland 13, Ore., wants H0 Varney Little Joe kit or other small H0 loco. kit, assembled H0 trucks inst., H0 brass rail.

E. L. MASENGILL, Box 51, Kingsport, Tenn., wants 00 gage 7 pole motor.

A. METZ, 2753 N. Spaulding Ave., Chicago 47, Ill., will sell 5 new 2672 Lionel cabooses $5 ea., 2 for $8; 3 AF pass. cars, $10; 1 AF right spring switch $3.50. Send for list.

GENE A. MILLER, AMM 2/c, A&R, N.A.S., Alameda, Calif., wants all '31, '32, '34; Sept., Oct. '35 issues *Lionel Magazine;* also Oct., Nov., Dec. '43, Jan. '44, Feb., Mar., '45 *Model Builder.* Will pay 50c ea., $13 for lot. Needs 3110 AF elec. type loco and trailer truck set for $427, AF loco (4 wheel).

WM. J. MILLER, 15219 Regina Ave., Allen Park, Mich., will buy Lionel 027 right auto. switch and plans or specs. for building underframe and detail on Lake Shore Elec. Birney car; side frames for trucks on 0 gage LSE 164, operating model.

WELDON MONTEITH, 103 Crestview, Bywood, Pa., will buy interior furnishings for 2 80-ft. 0 gage dining-cars.

(R) WARREN B. MORSE, Excelsior, Minn., will sell or swap for 0 gage 2-rail eqpmt., the following; *Railroad Magazine,* Apr., June, July, Aug., Sept., Dec. '36; Jan., Feb., Mar., Apr., May, July, Aug., Sept., Oct., Dec. '37, complete '38 to June '45; *Model Craftsman,* Jan., Mar., Apr., May, Dec. '36; all of '37 and '38, Jan., Feb., Mar. '39. Best offer takes all or any part.

HAROLD PAQUE, 610 Zimmer Ave., Menominee, Mich., will sell Lionel 027 elec. uncoupler cars, locos, switches, track, eqpmt. Send for list.

MURRAY T. POULSON, Woodville, Ont., Canada, will trade Lionel 0 gage 2-4-2 loco and tender for old issues *Lionel, AF Model Builder* mags.

JOE RHODEN, 100 Barnard Rd., Manteno, Ill., wants plans, drawings, blueprints, to ¼-in. scale of n.g. locos, cars. Write first. Wants to hear from Ga. railfans and all model railroaders.

RICHARD A. SILLIMAN, 6221 23 St. N., Arlington, Va., will trade home-built st.-gage 4-6-4 steam-type loco for Lionel 0 gage 763 EW or two 250 EW.

FISK TARBOX, 50 Gedney Park Drive, White Plains, N. Y., will buy *Miniature Elec. Railroad Constructor;*

"YOU should complain about travel inconveniences—think of me! I've got to come back again!"